

DIAGNOSES

Specierum novarum

in herbario Horti Regii Botanici Edinburgensis cognitarum.

CCLI-CCCL.

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[Notes, R.B.G., Edin., No. XLVI, March 1917.]

Wt. 4138/89—375—5/17—N. & Co., Ltd. Gp. 10.

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Acanthopanax evodiaefolius, Franch., var. **ferrugineus**,
 W. W. Sm. Var. nov.

A typo foliolis ad costam nervosque rufo-tomentellis, pedunculis pedicellisque rufo-pilosulis recedit; cetera cum typo congruunt.

"China:—Shweli-Salween divide, Yunnan. Lat. 25° 20' N. Alt. 8000 ft. Shrub of 12-18 ft. Flowers olive-green, anthers yellow. In open thickets. Aug. 1913." G. Forrest. No. 12,068.

"Upper Burma:—Naung-Chaung ridge, Nwai divide. Alt. 9000-10,000 ft. Big tree in dry forests. June 1914." F. Kingdon Ward. No. 1707.

Var. **gracilis**, W. W. Sm. Var. nov.

A typo foliis saepe 5-foliolatis ad axillas nervorum ferrugineo-tomentosis, umbellis paucifloris, pedunculis gracilibus strictis, pedicellis fructiferis ad 3.5 cm. longis recedit.

"China:—Lichiang Range, Yunnan. Lat. 27° 40' N. Alt. 11,000 ft. Shrub of 20 ft. In fruit, fruits purple. Shady thickets. Sept. 1913." G. Forrest. No. 11,282.

Acanthopanax gracilistylus, W. W. Sm. Sp. nov.

Species valde affinis *A. Rehderiano*, Harms, quoad habitum foliaque simillima sed inter alia stylis duobus longiusculis gracilimis liberis bene notata.

Frutex 2-3 m. altus ramulis tenuibus glabris cinereis vel brunnescentibus, aculeis paucis 3-4 mm. longis validiusculis recurvatis. Folia petiolis 3-5 cm. longis laminam superantibus glabris praedita; foliola 5, subsessilia, majora plerumque 3-3.5 cm. longa, circ. 1.2 cm. lata, obovata vel oblanceolata, acuta vel breviter acuminata, basi cuneata, dimidio superiore crenato-

serrulata serraturis incurvis, ad insertionem petiolulorum sparsim ferrugineo-tomentella, supra atroviridia glabra, infra multo pallidiora, ad axillas nervorum ferrugineo-tomentella, nervulis bene reticulatis subtus in sicco subconspicuis. Umbellae in ramulis multo abbreviatis 1-2-natae, nec terminales, pedunculo (fructifero) 3-5 cm. longo glabro suffultae; pedicelli 6-10 mm. longi glabri gracillimi; styli 2, gracillimi, liberi, circ. 2 mm. longi. Fructus circ. 6 mm. longus, 5 mm. latus, complanatus, niger; loculi 2; semina albumine uniformi praedita.

"China:—Mountains in the N.E. of the Yangtze bend, Yunnan. Lat. 27° 45' N. Alt. 9000-10,000 ft. Shrub of 6-10 ft. In fruit. In open thickets. July 1913." G. Forrest. No. 10,411.

"Mekong-Yangtze divide, Yunnan. Lat. 27° 40' N. Alt. 10,000 ft. Spinous shrub of 6 ft. Fruits black. Open situations amongst rocks. July 1914." G. Forrest. No. 12,858.

Acanthopanax Wardii, W. W. Sm. Sp. nov.

Species affinis *A. trifoliolato*, Schneider sed ramulis inermibus, folioli integris inter alia recedit; ab *A. lasiogyne*, Harms foliolis semper integris ovario glabro praeter alia signa differt.

Frutex 1-3 m. altus ramulis glabris cortice pallide cinereo praeditis; aculei in speciminibus nostris nulli. Folia petiolo 2-4 cm. longo glabro suffulta; foliola 3, sessilia, plerumque 3-5 cm. longa, 1.5-3 cm. lata, ovata vel oblongo-ovata vel obovata, apice obtusa vel acutiuscula, basi late cuneata, margine integra, siccando papyracea, ad insertionem foliolorum sparsim tomentella, cetera glaberrima, supra viridia infra pallidiora nervis nervulisque immersis. Umbellae 4-6-natae, terminales pedunculo communi deficiente, densiflorae; pedunculi ad 2 cm. longi glabri nisi ad insertionem pedicellorum tomentellam; pedicelli 5-10 mm. longi glabri haud articulati. Calycis margo minute villosulus lobis vix evolutis; petala triangularia viridia vel viridi-alba; stamina 5; ovarium glabrum apice excepto, biloculare; styli 2, basi paululum connati, multum recurvati; fructus circ. 7 mm. longus et latus, atro-purpureus, multum complanatus; semina albumine uniformi praedita.

"China:—N.W. Yunnan, 8500 ft. Bushy shrub, 4-8 ft., by torrent. September 1913." F. Kingdon Ward. No. 1098.

"Bei-ma Shan, Mekong-Yangtze divide, Yunnan. Lat. 28° 20' N. Alt. 10,000 ft. Shrub of 6-9 ft. Flowers green, anthers creamy-white. Open situation amongst scrub and rocks. Aug. 1914." G. Forrest. No. 13,282.

"Ghi Shan, east of Tali Lake, Yunnan. Lat. 25° 48' N. Alt. 9000 ft. Shrub of 10 ft. Fruits black-purple. In open thickets. Sept. 1914." G. Forrest. No. 13,537.

Acer Wardii, W. W. Sm. Sp. nov.

Species birmanica distinctissima; ab *Aceribus* indo-birmanicis aliquatenus remota; ex affinitate *A. sinensis*, Pax esse videtur sed foliis trilobis, floribus valde diversis inter alia differt.

Arbor parva 8-11 m. alta ramulis hornotinis glabris. Folia membranacea vel tenuiter chartacea petiolo 3-4 cm. longo gracili suffulta; lamina 5-9 cm. longa, 6-9 cm. lata, basi cordulata, ad duas partes trilobata, supra glabra, infra glabra nisi ad nervos tres primarios sparsim fulvo-pilosos; lobi lanceolati longe acuminati (medianus aliis paulo major), margine ex toto crebre et argute serrulati serraturis apiculatis; nervi in sicco plus minusve conspicui. Inflorescentia (mascula tantum visa) terminalis cum pedunculo circ. 2 cm. longo ad 7 cm. longa breviter paniculata bracteis linearibus 7-8 mm. longis ornata glabra; pedicelli circ. 5 mm. longi. Flores 5-meri. Sepala 2-3 mm. longa linearia. Petala sepalis plus minusve similia. Stamina 8 in medium discum inserta, circ. 1 mm. longa. Fructus deest.

"Upper Burma:—Small tree of 25-35 ft. Open drier parts of forest at 9000-10,000 ft., near Htaungaw, valley of Naung-Chaung, Lashi country. May 1914." F. Kingdon Ward. No. 1614.

An interesting addition to the flora of Burma. Unfortunately only withered male flowers are available in the specimen.

Arisaema candidissimum, W. W. Sm. Sp. nov.

Inter species chinenses spatha alba roseo-suffusa bene notata.

Planta circ. 30 cm. alta. Tuber depresso-globosum 3-4 cm. diametro. Folia petiolo ad 30 cm. longo praedita; lamina trifoliolata vel ad duas partes vel ad medium subirregulariter 3-partita raro subsimplex; foliola suborbicularia vel late ovata, 8-18 cm. longa et lata, apice breviter et abrupte cuspidata, basi plus minusve rotundata petiolulis nullis vel subnullis, in sicco tenuiter membranacea, subtus glaucescentia nervis lateralibus pluribus conspicuis. Pedunculus petiolum plus minusve aequans. Spatha masculina ad 14 cm. longa alba roseo-suffusa; pars quasitubulosa 2.5-3 cm. longa, circ. 2 cm. lata; lamina ovato-lanceolata longe acuminata, medio ad 5 cm. lata, delicatissime membranacea; spadix circ. 6 cm. longus apice obtusus. Flores feminei desunt.

"China:—Fengkow Valley, N.W. Yunnan. Lat. 27° 40' N. Alt. 8000-9000 ft. Plant of 9-12 inches. Spathe white, faintly flushed rose. Open dry rocky situations and on ledges of slate cliffs. June 1914." G. Forrest. No. 12,724.

A very beautiful species. I am informed by Mr. Forrest that he only saw the plant once, and he believes it is rare in Yunnan.

Berchemia nana, W. W. Sm. Sp. nov.

Species ex affinitate *B. lineatae*, DC. a qua habitu prostrato, ramulis stipulis persistentibus plus minusve obsitis, sepalis petala staminaque distincte superantibus inter alia recedit.

Fruticulus prostratus ramis 30-40 cm. longis; ramuli glabri stipulis conspicuis membranaceis diu persistentibus ad 5 mm. longis lanceolatis longe acuminatis plus minusve celati. Folia tenuiter papyracea petiolo circ. 2 mm. longo glabro suffulta; lamina plerumque 5-8 mm. longa, 4-6 mm. lata, ovalia, apice rotundata mucronulata, basi rotundata vel subrotundata, utrinque glabra, supra viridis infra pallidior vix papillosa, nervis vulgo 4 paribus. Inflorescentiae parvae inter folia plus minusve celatae; flores axillares solitarii racemulos 2-3-flosos foliatis formantes; pedicelli 2-3 mm. longi glabri basi stipulis obsiti. Alabastra subglobosa, apice obtusiuscula. Sepala circ. 4 mm. longa triangularia acuminata glabra; petala multo minora anguste obovalia albida; stamina petalis paululo breviora. Fructus deest.

"China:—Eastern flank of the Lichiang Range, Yunnan. Lat. 27° 30' N. Alt. 10,000-11,000 ft. Prostrate shrub of 12-16 inches. On the faces of cliffs. Flowers yellowish-white. Aug. 1910." G. Forrest. No. 6288.

Botryopleuron yunnanense, W. W. Sm. Sp. nov.

Species affinis *B. axillari*, Hemsl. et *B. latifolio*, Hemsl. a quibus habitu suffruticoso scandente, ramis petiolisque fulvo-pilosulis, inflorescentiis ramulos breves terminantibus differt.

Fruticulus scandens 1.2-2.4 m. altus ramis gracilibus plus minusve fulvo-pilosulis. Folia alterna petiolo 3-5 mm. longo dense fulvo-pilosulo praedita; lamina ad 5 cm. longa, ad 2.5 cm. lata, ovata, apice sensim et longiuscule acuminata, basi rotundata, margine serraturis apiculatis serrata, in sicco membranacea, supra atroviridis lucida ad costam fulvo-pilosula ceterum glabra, infra pallidior ad costam nervosque sparsim fulvo-pilosula, nervis primariis utrinque 3-4 subtus subconspicuis. Inflorescentiae dense spiciformes 2.5-5 cm. longae ramulos breves (ad 2.5 cm. longos), dense fulvo-pilosulos terminantes; flores subsessiles saturate coerulei; bractae subulato-lineares ad 5 mm. longae; calycis fere ad imum fissi lobi sublineares 3-4 mm. longi ciliolati; corollae 5-6 mm. longae tubus cylindricus, intus barbatus, lobi circ. 2 mm. longi lanceolati acuti. Stamina 2 longe exserta medio barbata. Capsula circ. 2 mm. longa oligosperma seminibus globosis brunneis circ. 0.25 mm. diametro.

"China:—Taping-pu Valley, Yunnan. Lat. 25° 30' N.

Alt. 7000–8000 ft. Scandent shrub of 4–8 ft. On scrub. May 1913." G. Forrest. No. 9898.

"Valley of the Mekong on the Tengyueh-Talifu route, Yunnan. 5000 ft. Procumbent plant, flowers deep rich blue. Aug. 1904." G. Forrest. No. 623.

Brandisia praticola, W. W. Sm. Sp. nov.

Species affinis *B. Hancei*, Hook. f. et *B. roseae*, W. W. Sm. sed multo minor; foliis floribusque abunde differt.

Fruticulus circ. 60 cm. altus erectus supra fastigiato-ramosus; ramuli graciles furfuraceo-pubescentes. Folia brevissime vel vix petiolata; lamina lineari-lanceolata vel lineari-oblonga, vulgo 3–4 cm. longa, 6–8 mm. lata, apice plus minusve acuta, basi cuneata, in sicco submembranacea, utrinque furfuraceo-pubescentis nervis subtus elevatis. Flores in axillis superioribus solitarii inflorescentiam laxam paniculatam e racemis brevibus compositam formantes; folia regionis floralis inferioribus paulo minora caeterum similia; pedicelli circ. 5 mm. longi bracteolis binis spathulatis vel linearibus 2–7 mm. longis saepe deficientibus apice praediti. Calyx campanulatus circ. 1.5 cm. longus ad trientem in lobos triangulares acutos fissus extus minute puberulus levissime 10-costatus. Corolla e calyce paululo exserta tubulosa leviter curvata tubo circ. 1 cm. longo extus intusque puberulo vel glabrescente, labio postico 7–8 mm. longo vix emarginato potius subintegro, antico minore 3-lobo intus longiuscule albo-pilosulo. Filamenta complanata; antherae albo-barbatae confluentes. Stylus pilosulus ovario dense tomentosus.

"China:—Mekong-Salween divide, Yunnan. Lat. 28° 10' N. Alt. 9000 ft. Plant of 2 ft. Flowers dull purple. Open stony pasture. Sept. 1914." G. Forrest. No. 13,350.

Brandisia rosea, W. W. Sm. Sp. nov.

Species ex affinitate *B. Hancei*, Hook. f. a qua foliis lanceolatis cuneatis, calyce bilabiato, corolla rosea inter alia facile distinguitur.

Frutex 1–2 m. altus erectus vel suberectus ramulis dense albo-stellato-tomentosis. Folia petiolo 4–5 mm. longo tomentoso suffulta; lamina lanceolata, 4–5 cm. longa, 1–1.5 cm. lata, acutissima, basi cuneata, in sicco chartacea, supra atroviridis sparsim stellato-puberula glabrescens, infra dense albo-tomentosa, nervis supra vix impressis vulgo 1–2 paribus. Flores axillares solitarii vel bini saturate rosei pedunculis 4–8 mm. longis bibracteatis tomentosis suffulti. Calyx campanulatus 7–8 mm. longus ad trientem bilabiatus dentibus obsoletis vel brevibus, extus albo-tomentosus intus dense pilosus. Corolla

2-2.5 cm. longa, tubulosa, curvata, extus dense tomentella basi ipsa excepta, tubo 5-7 mm. diametro intus glabro, labio postico circ. 4 mm. longo emarginato, antico minore 3-lobo, ambobus utrinque tomentellis. Antherae dense et longiuscule barbatae. Stylus pilosulus ovario dense tomentosus.

"China:—Western flank of the Tali Range, Yunnan. Lat. 25° 40' N. Alt. 10,000 ft. Shrub of 3-5 ft. Flowers deep rose. Open dry situations amongst scrub. July 1913." G. Forrest. No. 11,565.

This new species is nearest to *B. Hancei*, Hook. f., from which it differs in foliage, calyx, and corolla.

***Brassaiopsis coriacea*, W. W. Sm. Sp. nov.**

Species affinis *B. floribundae*, Seem. a qua foliis coriaceis integris, inflorescentia praelonga corymboso-paniculata praeter signa minora differt; a *B. speciosa*, Dcne. et Planch. specie javanica inflorescentia imprimis discrepat.

Frutex 4-10 m. altus. Folia ampla petiolo ad 60 cm. longo cito glabrescente suffulta digitata; petioluli 5-7 cm. longi primum tomento ferrugineo induti mox glabrescentes; foliola 7-9, ad 22 cm. longa, ad 9 cm. lata, plus minusve elliptica, apice breviter et subabrupte acuminata, basi late cuneata, margine integra vel raro denticulis minutis remotis obscure notata, in sicco alutacea, supra glabra vel hic illic reliquiis tomenti conspersa, infra subglabra tomento ferrugineo cito delapso; nervi circ. 12 paria et costa subtus prominula reticulo nervulorum utrinque subconspicuo. Inflorescentia ampla ad 60 cm. longa, e basi corymboso-paniculata, ramis ramulisque primo ferrugineo-tomentosis sub fructum fere glabris, bracteis ovatis plus minusve persistentibus; umbellae fructiferae circ. 5 cm. diametro multiflorae pedicellis fere 2 cm. longis cum bracteolis ferrugineo-tomentellis. Fructus globosus circ. 6 mm. diametro disco plano coronatus bilocularis; stylus simplex 2 mm. longus.

"China:—Shweli Valley, Yunnan. Lat. 25° N. Alt. 5000 ft. Shrub on tree of 15-35 ft. In fruit. Open situations. June 1912." G. Forrest. No. 8297.

"Hills to the N.E. of Tengyueh, Yunnan. Lat. 25° 10' N. Alt. 6500 ft. Shrub of 12-20 ft. In forest. Open situations. Aug. 1912." G. Forrest. No. 8856.

***Brassaiopsis dumicola*, W. W. Sm. Sp. nov.**

Species affinis *B. hispidae*, Seem. a qua petalis extra albido-tomentellis inter alia signa recognoscitur.

Frutex 6-9 m. altus ramis crassis cicatricibus perlatis vaginarum delapsarum notatis apice primo ferrugineo-tomentellis;

aculei numerosi saepe robusti. Folia 30 cm. vel ultra diametro, petiolo 9-15 cm. longo ferrugineo-tomentello suffulta, alte palmato-lobata, basi cordatula, in sicco firme papyracea, primo utrinque tomento albido vel saepius ferrugineo stellato induta, mox glabra vel glabrescentia; pars integra circ. 1 cm. alta; lobi circ. 9, oblongi, ad 18 cm. longi, ad 4 mm. lati, apice longiuscule acuminati, basi multo excisi pseudo-petiolulos formantes, margine subspinoso-serrulati; nervi subtus prominuli; stipularum apices liberi circ. 1 cm. longi subspinescentes. Inflorescentia elongata rigida angusta; rhachis ad 35 cm. longa, crassissima primo tomentella mox glabrescens unde fere angulo recto oriuntur pedunculi crassi 3-5 cm. longi pauciramosi vel simplices bracteis ovatis ornati; pedicelli vix 1 cm. longi dense ferrugineo-tomentelli; umbellae multiflorae ad 3 cm. diametro. Calycis dentes bene evoluti circ. 1 mm. longi acuti tomentelli; petala 5, 3.5 mm. longa, triangulari-ovata, extra albido-tomentella viridi-lutea. Ovarium primo albido- vel ferrugineo-tomentellum, obconicum, circ. 4 mm. longum, 2-3-loculare; discus planus paululo ultra calycis marginem protrusus medio depressus, unde stylus simplex vix 2 mm. longus.

"China:—Ma-chang-kai Valley, N. of Tengyueh, Yunnan. Lat. 25° 20' N. Alt. 6000 ft. Spinous shrub of 20-30 ft. Flowers greenish-yellow. In thickets. Feb. 1913." G. Forrest. No. 9671.

Brassaiopsis palmipes, G. Forrest. Sp. nov.

Species valde affinis *B. trevisioidi*, W. W. Sm. infra descriptae a qua foliorum lobis oblongo-ellipticis pseudo-petiolulatis (ut saepe in *Trevesia*) inter alia differt.

Frutex 6-9 m. altus ramis crassis aculeatis. Folia (minora) 30-35 cm. diametro, petiolo 12-25 cm. longo primum ferrugineo-tomentello nonnunquam praesertim ad apicem aculeato praedita, alte palmato-lobata, basi cordata, in sicco submembranacea, supra aculeolis sparsis notata atque hic illic parce puberula, infra initio dense ferrugineo-tomentella, mox glabrescentia; pars integra 5-7 cm. alta, orbicularis margine integro; lobi 8-11, oblongo-elliptici, vulgo 10-15 cm. longi, 5-7.5 cm. lati, apice rotundati saepe abrupte acuminati, basi rotundati ad costulam excisi, margine subspinuloso-serrulati; nervi subtus aliquatenus prominuli; stipularum apices liberi subulato-lanceolati. Inflorescentiae quoad formam et magnitudinem cum eis *B. trevisioidis* quadrant; pedicelli ferrugineo-puberuli; flores 5-meri; calycis dentes brevissimi acuti; petala extra parce tomentella; ovarium vulgo 2-loculare, nonnunquam 3-loculare, stylo simplici vix 2 mm. longo coronatum.

"China:—Shweli Valley, Yunnan. Lat. 25° N. Alt. 5000

ft. Shrub of 20-30 ft. In thickets. May 1912." G. Forrest. No. 7887.

[The above species is very near *B. trevesioides*, W. W. Sm., and is found in the same region. I did not see, however, any evidence of intermediates, and the leaf-form is very extraordinary.—G. F.]

***Brassaiopsis shweliensis*, W. W. Sm. Sp. nov.**

Species affinis *B. aculeatae*, Seem. a qua foliolis coriaceis facile distinguenda est.

Frutex circ. 7.5 m. altus ramis crassissimis hic illic aculeatis. Folia ampla petiolo ad 40 cm. longo ferrugineo-tomentoso cito glabrescente praedita digitata; petioluli circ. 1 cm. longi ferrugineo-tomentelli mox subglabri; foliola 6-7, ad 24 cm. longa, ad 7 cm. lata, apice plus minusve longe acuminata, basi anguste cuneata, margine (dimidio superiore) indurato-serrata, coriacea, primum tomento stellato ferrugineo vel albido conspersa, tandem glabra; costa nervique 12-15 paria subtus eminentes reticulo nervulorum subconspicuo. Inflorescentia ampla circ. 30 cm. longa; rhachis crassa primum tomentella mox glabrescens rugosissima unde oriuntur fere recto angulo pedunculi numerosi circ. 2.5 cm. longi crassi umbellam multifloram solitariam gerentes, bracteis circ. 1.5 cm. longis coriaceis persistentibus cymbiformibus incurvis apice indurato-acutatis praediti; pedicelli circ. 1 cm. longi ferrugineo-tomentelli. Calycis dentes circ. 1 mm. longi acuti; petala non visa; fructus globosus circ. 7 mm. diametro bilocularis, tomento tenui crustaceo tandem deciduo indutus, disco hemisphaerico stylo simplici 2 mm. longo.

"China:—Shweli Valley, Yunnan. Lat. 25° N. Alt. 6000 ft. Shrub of 25 ft. In fruit. Open situations in thickets. July 1912." G. Forrest. No. 8702.

***Brassaiopsis trevesioides*, W. W. Sm. Sp. nov.**

Species ex affinitate *B. mitis*, Clarke et *B. fatsioides*, Harms; folia eis *Trevesiae palmatae*, Vis. subsimilia.

Frutex 6-9 m. altus. Aculei desunt. Folia 40 cm. vel ultra diametro petiolo circ. 40 cm. longo sparsim furfuraceo-tomentello mox glabrescente suffulta, alte palmato-lobata, basi cordata, in sicco papyracea, utrinque glabrescentia, subtus primo fortasse indumento deterrenti ferrugineo plus minusve conspersa; pars integra circ. 9 cm. alta (quasi petiolulos conjungens); lobi circ. 11, oblongi, in spec. nostris ad 18 cm. longi, ad 6 cm. lati, apice caudato-acuminati, basi excisi sinum latiusculum formantes, margine serraturis multo incurvis praediti; nervi subtus

prominuli. Inflorescentia corymboso-paniculata, circ. 20 cm. longa, circ. 30 cm. lata, a basi ramosa, parce puberula; pedunculi ad 12 cm. longi, pedicelli 1.5 cm. longi, fructu ad 2 cm. aucti, glabri vel glabrescentes; umbellae floriferae fere 4 cm. diametro multiflorae. Calycis dentes vix evoluti; petala 5, circ. 4 mm. longa triangularia vel ovato-triangularia, acutiuscula, extra sparsim puberula, viridi-flava; ovarium obconicum fere glabrum biloculare, cum disco hemisphaerico 4 mm. longum, stylo simplici 2 mm. longo.

"China:—Shweli Valley, Yunnan. Lat. 25° N. Alt. 6000 ft. Shrub of 20–30 ft. Flowers greenish-yellow. Open situations. July 1912." G. Forrest. No. 8670.

Buddleia Cooperi, W. W. Sm. Sp. nov.

Species affinis *B. limitaneae*, W. W. Sm. et *B. Forrestii*, Diels et *B. taliensi*, W. W. Sm., sed calycis segmentis, stylo brevissimo inter alia ab omnibus facile separatur.

Frutex ad 1 m. altus caulibus plus minusve quadrangulatis anguste alatis infra glabrescentibus supra sparsim stellato-puberulis, ramulis paucis gracilibus. Folia sessilia vel petiolo brevissimo circ. 2 mm. longo suffulta; lamina vulgo 10–15 cm. longa, 4–7.5 cm. lata, late lanceolata vel oblanceolata, apice longiuscule acuminata, basi late cuneata, margine plus minusve serrata serraturis calloso-apiculatis, in sicco tenuiter membranacea, supra viridis sparsim scabridule puberula, subtus subolivacea tomento exiguo vel fere deficiente praedita. Inflorescentiae laxae e cymis breviter pedunculatis 1–3-floris compositae; cymae partim ex axillis foliorum superiorum remotis quasi verticillastri orientes, partim paniculam terminalem brevem angustam efficientes. Bractae subulato-lineares. Flores pedicellis plus minusve 5 mm. longis sparsim puberulis suffulti ex collectore albi purpureo-tincti. Calycis plus minusve 5 mm. longi extrinsecus minute puberuli vel stellato-furfuracei tubus ad medium in dentes triangulares breviter calloso-apiculatos sinu mediocri lobulis minimis saepe praedito inter se separatos divisus. Corolla 1–1.2 cm. longa; tubus circ. 4 mm. latus, extra glaber vel parce pilosulus intra pilosus, lobi circ. 2.5 mm. diametro extra glabrescentes intra dense pilosi. Stamina ad medium tubum affixa. Ovarium glabrum circ. 2.5 mm. longum, stylo brevissimo circ. 0.5 mm. longo, stigmatе conspicuo quam stylus longiore. Fructus deest.

"Bhutan:—Between Rudong La and Pumthang, at an elevation of 11,000 ft. A bush of 2–3 ft., on gravel and debris. Flowers white, tinged purple. 23rd July 1915." Cooper. No. 4154.

This Himalayan plant finds its nearest affinities in certain

species of the Burmo-Chinese border; it is closely akin to *B. limitanea*, W. W. Sm., from Northern Burma, and has a similar habit and the same thin membranous leaves. The calyx is however differently cut, and lobules appear often in the narrow sinuses; the most marked distinction, however, is in the style, which is unusually short.

Buddleia Fallowiana,* Balf. f. et W. W. Sm. Sp. nov.

Species affinis *B. macrostachyae*, Benth. et *B. niveae*, Duthie quibuscum in herbariis hortisque confusa est; corolla gracillima, staminibus paulo supra medium tubum nec ad fauces insertis inter alia recedit.

Frutex 1-4 m. altus ramis teretibus vel obscure angulatis tomento stellato denso mollissimo niveo vel fulvido-albo indutis. Folia opposita petiolo 5-10 mm. longo dense tomentoso praedita, superiora 6-14 cm. longa, 2-4 cm. lata, lanceolata, basi plus minusve cuneata, apice acuta vel breviter acuminata, chartacea, margine regulariter crenato-denticulata denticulis minute apiculatis, supra primo sparsim araneoso-tomentosa tandem subglabrescentia obscure viridia nervis 8-10 paribus impressis, infra tomento denso niveo vel fulvido induta nervis paulo elevatis. Inflorescentiae spiciformes in apice ramulorum solitariae vel ternae, 8-14 cm. longae, circ. 2.5 cm. latae densiflorae continuae dense tomentosae e cymulis congestis brevissime pedunculatis compositae; bracteae infimae foliis caulinis subsimiles sed minores et angustiores, medianae et supremae lineares cymulas plus minusve aequantes. Calyx tubulosus circ. 3 mm. longus tubo corollae adpressus, extus dense niveo- vel fulvido-tomentosus, intus glaber dentibus circ. 1.5 mm. longis anguste triangularibus acutis. Corollae lavendulaceae tubus circ. 8 mm. longus, circ. 1 mm. latus extus tomentosus intus dimidio superiore villosus; lobi rotundati circ. 2 mm. diametro margine plus minusve erosuli extus tomentelli. Stamina paulo supra medium tubum inserta, antheris a faucibus subremotis. Ovarium circ. 1.5 mm. longum basi glabrum supra albo-tomentellum; stylus circ. 1.5 mm. longus. Fructus circ. 4 mm. longus; semina non visa.

Buddleia macrostachya, Benth. var. *yunnanensis*, Dop ex Diels in Notes, R.B.G., Edin., vii (1912), 145, quoad specimina Forrestiana sub n. 2599.

"China:—Branched shrub of 6-12 ft. Flowers rich lavender, throat of corolla orange, fragrant, with an odour resembling vanilla. Dry stony situations along base of the

* The specific name is given to keep in memory Sergeant George Fallow, 5th Batt. The Royal Scots, a former gardener on the staff of the Royal Botanic Gardens, Edinburgh, who died 19th August 1915, in Egypt, of wounds received in action at Gallipoli.

eastern flank of the Lichiang Range, Yunnan. Lat. $27^{\circ} 12' N$. Alt. 9000 ft. July 1906." G. Forrest. No. 2599.

"Shrub of 4-10 ft. Flowers soft lavender, throat orange, fragrant. By streams at the north end of the Lichiang plain. Lat. $27^{\circ} 20' N$. Alt. 9000 ft. July 1910." G. Forrest. No. 6047.

"Shrub of 3-5 ft. Flowers lavender, throat orange, strongly fragrant. Stony situations by streams on the eastern flank of the Lichiang Range. Lat. $27^{\circ} 30' N$. Alt. 9000-10,000 ft. Aug. 1910." G. Forrest. No. 6285.

"Lichiang Range, 8500-10,000 ft. July 1913." G. Forrest. No. 10,591.

Also specimens cultivated by Bees, Ltd., and in the Royal Botanic Garden, Edinburgh, where it flowered Sept.-Oct. 1912, and was then named *B. macrostachya*, Benth. var. *yunnanensis*, Dop.

The nearest allies of this species are *B. macrostachya*, Benth., *B. nivea*, Duthie, and *B. nivea* var. *yunnanensis*, Rehder and Wilson (which is the same as *B. macrostachya* var. *yunnanensis*, Dop). All occur in S.W. China. The flowers of *B. Fallowiana* are much more slender, much longer in proportion to their width, the stamens are inserted a little above the middle of the tube, not near the sinuses of the corolla lobes as in the other species; the leaves are finely denticulate and show until a late stage a thin coating of whitish tomentum above.

Buxus microphylla, Sieb. et Zucc., var. ***prostrata***, W. W. Sm. Var. nov.

Planta nana prostrata calcicola. Ramuli petiolique minute puberuli.

"China:—Lichiang Range, Yunnan. Lat. $27^{\circ} 40' N$. Alt. 12,000 ft. Prostrate evergreen shrub of 12-18 inches. Flowers yellow. On cliffs and humus-covered boulders. June 1913." G. Forrest. No. 10,184.

"Eastern flank of the Lichiang Range. Prostrate shrub of 2-4 ft. On the face of limestone cliffs. Aug. 1910." G. Forrest. No. 6300.

Buxus mollicula, W. W. Sm. Sp. nov.

Species inter affines foliis maturis utrinque molliter pubescentibus bene notata.

Frutex ad 3 m. altus. Ramuli angulati dense atque molliter pubescentes, seniores tarde glabrescentes cinerascetes. Folia petiolo circ. 1 mm. longo pilosulo suffulta; lamina 3-4 cm. longa, 1.5-2.5 cm. lata, plus minusve elliptica, apice rotundata vel

obtusa brevissime emarginata vel calloso-apiculata, basi vulgo late cuneata, coriacea, supra subnitida ubique molliter puberula, nervis subconspicuis, subtus paulo pallidior, molliter puberula, usque ad marginem paululum in sicco revoluta, nervis obscuris. Flores non visi. Capsula circ. 9 mm. longa olivacea seminibus circ. 5 mm. longis, circ. 2 mm. latis, subtrigonis nigris nitentibus.

"China:—Mountains in the N.E. of the Yangtze bend, Yunnan. Lat. 27° 45' N. Alt. 10,000 ft. Shrub of 8-10 ft. In fruit. Open situations in ravines. July 1913." G. Forrest. No. 10,684.

Campanula xylopoda, J. F. Jeff. Sp. nov.

Species affinis *C. canae*, Wall. sed inter congeneres caudice lignoso crassissimo, caulibus numerosis lignosis conspicua.

Planta perennis ad 30 cm. alta undique tomento canescente praesertim in caule atque paginis foliorum inferioribus induta. Caudex \pm 1 cm. diametro; caules 15-20 basi orientes lignosi graciles ascendentes sat foliosi. Folia 1-2 cm. longa 3-6 mm. lata, lanceolata subacuta vel obtusa margine paululo sinuata, basi acuta, membranacea, supra atroviridia tomentosa infra tomento densiore canescente praesertim ad costam venasque induta; nervi obscuri; petioli 1-2 mm. longi. Paniculae pauciflorae laxae; bractae foliis subsimiles sed minores; pedicelli graciles 1.5-2 cm. longi. Receptaculum circ. 3 mm. longum; calycis dentes circ. 4 mm. longi anguste lanceolati acuti canescentes. Corolla coerulea 1 cm. longa cylindrica circ. ad medium in lobos lanceolatos subacutos divisa, ore 4-5 mm. lata, extus pubescens. Stamina stylo breviora antheris circ. 4 mm. longis filamentis 1 mm. longis. Stylus 7 mm. longus.

"China:—North-East Yunnan, dry calcareous banks of the Blue River (Yangtze-kiang) at 1200 ft. Coll. E. E. Maire. No. 798 (anno 1913) in Herb. Edin.

Carduus euosmus, G. Forrest. Sp. nov.

Species inter affines hujus regionis habitu acauli, capitulis permagnis, floribus aurantiacis fragrantibus bene notata.

Herba perennis acaulis radice crassissima pluricipite reliquiis fibrosis petiolorum praeteritorum ad collum dense induta. Folia petiolo ad 5 cm. longo complanato plurisulcato dense albo-araneoso-tomentoso praedita; lamina 25-30 cm. longa, 5-8 cm. lata, ambitu anguste lanceolata, irregulariter pinnatifida, supra glabra sublucida infra tomento albo denso araneoso induta, lobis latis basi confluentibus irregulariter lobulatis, nervis subtus conspicuis stramineis in spinas longas excurrentibus. Capitula plerumque 4-12, subglobosa, 5-7 cm. diametro subsessilia vel

pedunculo crasso circ. 1.5 cm. longo albo-tomentoso suffulta; involucri phylla imbricata erecta lineari-lanceolata extus albo-tomentosa in spinam longam validam rectam in sicco stramineam producta; flores aurantiaci circ. 4 cm. longi fragrant; pappi setae circ. 3 cm. longae minute barbellatae nec plumosae, roseo-albae; achaenia 8-9 mm. longa, obovata, complanata, medio 3 mm. lata.

"China:—Atuntsu Valley, Yunnan. Lat. 28° 26' N. Alt. 12,000 ft. Plant of 3-4 inches. Flowers golden yellow, fragrant. Open dry stony pasture. Sept. 1914." G. Forrest. No. 13,347.

Caryopteris siccanca, W. W. Sm. Sp. nov.

Species valde affinis *C. divaricatae*, Maxim. a qua foliis cordatis utrinque longiuscule setosulis, caulibus et inflorescentiae ramulis et pedunculis et pedicellis densissime glandulosis et hirsutis, floribus albis, calyce irregulari differt.

Planta 60-75 cm. alta; caules angulati patenter hirsuti et glandulosi. Folia in sicco tenuiter membranacea, petiolo ad 7.5 cm. longo hirsuto glanduloso suffulta; lamina ad 8 cm. longa, ad 7 cm. lata, late ovata, apice acutata mucronata, basi cordata, margine utrinque serraturis circ. 12 grossis ovatis mucronatis incisa, utrinque setis adpressis albidis plus minusve dense conspersa. Inflorescentia quoad formam magnitudinemque ei *C. divaricatae* subsimilis sed angustior; axis et ramuli cum pedunculis pedicellisque hirsuti et pilis glanduloso-capitatis fulvidis densissime obsiti; bractae lanceolatae vel lineari-lanceolatae, infra circ. 1 cm. longae, supra sensim decrescentes. Calyx 4-5 mm. longus circ. ad medium bilabiatus, lobo superiore trifido, inferiore bifido, extra praesertim ad basim glandulosus et hirsutulus. Corolla ei *C. divaricatae* subsimilis extra pilosula alba. Stamina glabra ad 1.5 cm. e tubo exserta. Stylus stamina subaequans in stylos duos longiusculos subulatos exiens. Fructus immaturus carnosulus, maturus deest.

"China:—On the Yung-pe Mountains, Yunnan. Lat. 26° 45' N. Alt. 9000 ft. Plant of 2½ ft. Flowers white. Open dry rocky pasture. June 1914." G. Forrest. No. 12,746.

Caryopteris trichosphaera, W. W. Sm. Sp. nov.

Species affinis *C. incanae*, Miq. et *C. tanguticae*, Maxim. a quibus corollae lobis longissime violaceo-villosis praeter alia signa divergit.

Fruticulus 45-60 cm. altus, ramosus; ramuli dense albido-crispato-tomentosi. Folia petiolo 2-5 mm. longo albido-tomentoso praedita; lamina ad 3 cm. longa, ad 2.5 cm. lata, ovata

vel oblongo-ovata, apice rotundata vel obtusiuscula, basi truncata vel truncato-rotundata, margine crenis 6-9 notata, papyracea, supra dense et breviter fulvido-pilosula, infra densissime incano-tomentosa; nervi 4-5 paria. Cymae subglobosae densiflorae in axillis superioribus, dense albido-villosae pedunculis pedicellisque brevibus. Calyx circ. 4 mm. longus tubulosus ad duas partes in lobos lineari-oblongas acutas divisus longe albido-villosus. Corolla circ. 6 mm. longa; tubus cylindricus fere 5 mm. longus extus hic illic villosus; lobi oblongi apice dense et longissime violaceo-villosi, quintus major fimbriatus. Stamina ad 4 mm. exserta. Fructus deest.

"China:—Near Atuntsu, Yunnan-Tibet frontier. Alt. 12,000-13,000 ft. Bushy undershrub $1\frac{1}{2}$ -2 ft. high. Flowers blue-violet. Aug. 1913." F. K. Ward. No. 1048.

Cassiope myosuroides, W. W. Sm. Sp. nov.

Species ex affinitate *C. palpebratae*, W. W. Sm.; foliis longiuscule scarioso-acuminatis infra mire bullatis ab omnibus speciebus asiaticis divergit.

Fruticulus humilis 7 cm. vix superans suberectus vel decumbens. Folia arcte imbricata tetrasticha 2-2.5 mm. longa, vix 1 mm. lata, ovata apice 1 mm. longo acuminato scarioso praedita, lateribus anguste scariosa, dorso convexa bullam ellipticam utrinque viridem extus setis adpressis ciliolatis modice obsitam intus glabram formantia. Flores axillares cernui (albidi?) pedicellis gracilibus circ. 2 cm. longis subabrupte abeuntibus dense araneoso-fulvido-villosis suffulti. Sepala 4-5 libera circ. 3 mm. longa plus minusve late elliptica in sicco atropurpurea, utrinque glabra, apice obtusa anguste scariosa. Corolla campanulata circ. 8 mm. longa lobis 5 ovatis \pm 2.5 mm. longis obtusis. Stamina 8 (in specimine dissecto) inclusa filamentis 2 mm. longis subulatis sparse pilosulis, antheris ovoideis apice aristis duabus elongatis ornatis. Discus 10-crenatus. Stylus 2.5 mm. longus columnaris apice truncatus. Fructus maturus deest.

"Upper Burma:—Burmo-Chinese frontier. Ridge of Naung-Chaung, Nwai divide. On bare granite rocks, north face, at 12,000 ft., and on summit with rhododendron carpet at 13,000 ft. Flowers over. 15th July 1914." F. Kingdon Ward. No. 1788.

Very readily distinguished by its leaves, scariose acuminate at the apex and with the rest of the lamina forming a green elliptic boss furnished with ciliate setae.

Cornus alsophila, W. W. Sm. Sp. nov.

Species affinis *C. Wilsonianae*, Wangerin a qua foliis subtus glaucis, nervis primariis 5-6 paribus, ovario glabriore minore,

stylo brevior divergit; a *C. Walteri*, Wangerin ramulis rubescentibus, foliis minoribus chartaceis subtus glaucis minute sparsimque pilosulis, ovario minore minute sparsimque pilosulo, stylo cylindrico recedit.

Frutex 2-3 m. altus ramulis cito glabris rubescentibus. Folia petiolo 1.5-2 cm. longo glabro vel sparsim pilosulo praedita; lamina plus minusve elliptica, 6-8 cm. longa, 3-4.5 cm. lata, apice breviter acuminata, basi cuneata rarius subrotundata, chartacea, supra haud lucida pilis albidis minutis conspersa, subtus glauca minutissime sparsimque pilosula, nervis 5-6 paribus infra conspicuis paulo eminentibus. Inflorescentia pedunculo 2-3 cm. longo suffulta paniculata ramulis saltem post anthesin glabris vel fere glabris. Ovarium fere globosum vix 2 mm. longum minute sparsimque pilosulum. Sepala lineari-lanceolata discum conspicuum subaequantia circ. 1 mm. longa. Petala staminaque non visa. Stylus circ. 3 mm. longus cylindricus parce pilosulus. Drupa nigro-purpurea globosa circ. 5 mm. diametro sparsim pilosula.

"China:—On the Tong-Shan in the Yangtze bend, Yunnan. Lat. 27° 20' N. Alt. 9000-10,000 ft. Open situations amongst scrub. Shrub of 6-9 ft. Fruits black-purple. Sept. 1913." G. Forrest. No. 11,176.

***Corydalis saltatoria*, W. W. Sm. Sp. nov.**

Species aliquatenus anomala; inflorescentia racemosa rhachi tortuosa pedicellis gracillimis prehensilibus floribus subremotis bracteis reflexis conspicua.

Planta gracillima erecta 40-60 cm. alta. Radices fibrosae. Caulis simplex vel parce ramosus flexuosus remote foliatus. Folia basalaria et caulina similia, petiolo 6-12 cm. longo gracillimo suffulta; lamina biternata petiolulis primariis vulgo 1-3 cm. longis, petiolulis secundariis 5-10 mm. longis; foliola ovata vel ovato-lanceolata integra subtus glaucescentia 1-1.7 cm. longa, ad 1.2 cm. lata, apice rotundata vel obtusa, basi rotundata vel late cuneata, tenuiter membranacea. Racemi in axillis superioribus remotiflori 3-5 cm. longi; bractee lineares \pm 2 mm. longae plerumque reflexae; rhachis abrupte flexuosa; pedicelli 1-2 cm. longi gracillimi flexuosi quasi-prehensiles; flores fere 2 cm. longi pallido-lutei. Sepala ovata acuminata \pm 1 mm. longa basi lobatula apice integra pallido-viridia. Petalum inferum circ. 9 mm. longum ecarinatum apice apiculo \pm 1 mm. longo praeditum; petalum superum inferiore paulo brevius ecristatum breviter apiculatum; calcar cylindricum circ. 1 cm. longum gracile fere rectum obtusiusculum. Ovarium lineare circ. 3 mm. longum stylo 3 mm. longo. Fructus deest.

"Upper Burma:—On the Burmo-Chinese frontier at the

Naung-Chaung, Nwai divide. In marshy leaf mould by streams in elfin forest shade. Alt. 10,000 ft. June 1914." F. Kingdon Ward. No. 1708.

A peculiar species; the racemes have a very zigzag rachis with linear reflexed bracts, and very slender pedicels, which appear to be more or less prehensile. The upper and lower petals have an apiculus; the bud at a certain stage consequently appears as if two-horned. The specific name is intended to indicate the delicately poised flowers which must be set in motion by the lightest current of air.

Cotoneaster glaucophylla, Franch., var. **meiophylla**, W. W. Sm. Var. nov.

Foliis minoribus 2-2.5 cm. longis, 1-2 cm. latis, ellipticis magis quam ovatis apice basique plus minusve rotundatis a typo divergit.

"China:—Mingkwong Valley, Yunnan. Lat. 25° 15' N. Alt. 6000-7000 ft. Shrub of 4-6 ft. Flowers creamy-white. Open situations among scrub. June 1912." G. Forrest. No. 8325.

This variety does not diverge very far from some of the specimens collected by Henry near Mengtsz. It appears to fruit earlier. Forrest's specimens are in young fruit, already inclining to red, and that in June.

Var. **vestita**, W. W. Sm. Var. nov.

Foliis primum subtus dense fulvido-tomentosis, inflorescentiis magis tomentosis, calyce primum dense albo-lanato-tomentoso nec glabro a typo divergit.

"Hills east of Tengyueh, Yunnan. Lat. 25° N. Alt. 6000 ft. Shrub of 5-8 ft. Flowers creamy-white. Amongst scrub. May 1912." G. Forrest. No. 7723.

Cotoneaster glomerulata, W. W. Sm. Sp. nov.

Species affinis *C. obscurae*, Rehder et Wilson a qua foliis, petiolis, inflorescentiis plurifloris, fructibus pyrenisque minoribus differt.

Frutex 1-3 m. altus ramis late patentibus; ramuli hornotini pilis fulvidis longiusculis adpressis dense tomentosi, annotini tarde glabrescentes fusci; gemmae fulvido-tomentosae. Folia petiolo 2-3 mm. longo dense tomentoso suffulta decidua; lamina vulgo 4-5 cm. longa, 2-2.5 cm. lata, ovato-lanceolata, apice plus minusve acuta, rarius acuminata vel obtusiuscula, breviter mucronata, basi rotundata vel late cuneata, in sicco papyracea, supra atroviridis ad tempus fructus maturi sparsim pilosa vel

subglabra, subtus tomento fulvido laxiusculo ex toto induta; nervi 4-5 paria, supra impressuli, cum costa impressa faciem subrugosam efficientes, infra paulo eminentes. Flores desunt. Fructus 3-11 in racemis congestis ramulos breves terminantibus; pedunculus brevis cum pedicellis 2-4 mm. longis dense adpresse fulvo-pilosus; fructus ipsi pyriformes circ. 5 mm. longi, apice fere 5 mm. lati, kermesini, plus minusve pilosi, sepalis inflexis tomentellis coronati; pyrenae vulgo 5, triangulari-ovoideae, 4 mm. longae, 2 mm. latae, nitentes, pallide brunneae.

"China:—Shweli Valley, Yunnan. Lat. 25° 30' N. Alt. 8000 ft. Shrub of 6-9 ft. Fruits dull crimson. Amongst scrub in open situations. Sept. 1913." G. Forrest. No. 12,046.

The following examples also in fruit and from the same area are probably conspecific; they have, however, fewer fruits in the inflorescence and fewer pyrenes, usually 3-4:—

"Mingkwong Valley, Yunnan. Lat. 25° 15' N. Alt. 6000-7000 ft. Shrub of 3-5 ft. In fruit. Amongst scrub. June 1912." G. Forrest. No. 8350.

"Mingkwong Valley. Lat. 25° 20' N. Alt. 7000 ft. Shrub of 4-8 ft. Fruits scarlet. Open situations amongst rocks. July 1912." G. Forrest. No. 8584.

Cotoneaster hebephylla, Diels, var. **fulvida**, W. W. Sm. Var. nov.

Foliis subtus tomento fulvido densiuscule indutis, ramulis floriferis pedicellisque calycibusque plus minusve dense fulvido-adpresso-pilosis recedit.

"China:—Yungchang-Mekong divide, Yunnan. Lat. 25° 15' N. Alt. 7000 ft. Shrub of 6-8 ft. Flowers creamy-white. Open situations amongst scrub. May 1913." G. Forrest. No. 9888.

Var. **incana**, W. W. Sm. Var. nov.

Foliis supra subclucidis infra tomento denso ad fructus maturi tempus persistente incano vix fulvido notata; flores non visi; fructus pyriformis 7-9 mm. longus, apice circ. 6 mm. latus, ruber; pyrenae 2, plano-convexae, 5 mm. longae, 3 mm. latae.

"China:—On the Tong-Shan, in the Yangtze bend, Yunnan. Lat. 27° 20' N. Alt. 10,000 ft. Shrub of 6-9 ft. In fruit. Fruits red. Open scrub. Aug. 1913." G. Forrest. No. 10,837.

Var. **majuscula**, W. W. Sm. Var. nov.

Foliis ellipticis majoribus plerumque circ. 3 cm. longis apice basique subrotundatis vel obtusis, inflorescentiis effusioribus, floribus majoribus a typo discrepat.

"China:—N.W. Yunnan, near Tibetan frontier, at 9000–10,000 ft." F. Kingdon Ward. No. 492.

The following probably represents the fruit:—

"Mountains in the N.E. of the Yangtze bend, Yunnan. Lat. 27° 45' N. Alt. 11,000 ft. Shrub of 6–8 ft. Fruits crimson. Open scrub. Oct. 1913." G. Forrest. No. 11,463.

The fruits are broadly pyriform, 8–9 mm. long, about 7 mm. broad; the pyrenes 2, about 5 mm. by 4 mm.

Var. *monopyrena*, W. W. Sm. Var. nov.

Fructibus majusculis ovoideis fere 1 cm. longis, 8 mm. latis, atrokermesinis, pyrenis duabus in unam coalitis, loculo altero seminifero, altero complanato vacuo bene notata.

"China:—Lichiang Range, Yunnan. Lat. 27° 30' N. Alt. 10,000 ft. Shrub of 9–12 ft. In fruit. Fruits black-crimson. Open situations by streams. Sept. 1913." G. Forrest. No. 11,422.

C. hebeophylla, Diels appears to be a very variable plant. It is quite possible that more than one species is included in this aggregate, and I have not been able to correlate to my satisfaction the fruiting specimens with the flowering. At the same time a detailed examination of the structure of the leaf and indumentum, as well as of the flowers, shows the examples to be very closely connected. Until further material is available I have judged it better to keep them under one specific name. Authentic fruiting specimens of the type are much wanted. The series shows a very definite approach to *C. racemiflora*, K. Koch, var. *soongorica*, Schneider, common in Western Szechwan, but the material at my disposal is not sufficient for me to determine whether *C. hebeophylla* should be ranged along with or under that species.

Cotoneaster lactea, W. W. Sm. Sp. nov.

Species affinis *C. Henryanae*, Rehder et Wilson, *C. rhytidophyllae*, Rehder et Wilson, *C. salicifoliae*, Franch., ab omnibus quibus foliis apice basique rotundatis vel obtusissimis differt.

Frutex 2–3 m. altus; ramuli hornotini tomento albido mox fulvido denso villosio induti, annotini glabri vel subglabri rubescentes, seniores cinereo-brunnei. Folia petiolo circ. 5 mm. longo dense fulvido-tomentoso suffulta; lamina 3.5–5 cm. longa, ad 3.3 cm. lata, late elliptica, apice plerumque rotundata, nunc obtusissima, breviter mucronata, basi rotundata vel late cuneata, crasse papyracea vel etiam coriacea, supra primo laxe et sparsim villosa mox glabrescens opaco-viridis vix lucida, infra tomento denso persistente villosio primo albido mox fulvido induta;

costa media et nervi 7-8 paria supra multum impressi subparalleli infra eminentes indumento suboperti; stipulae dimidium petiolum aequantes sublineares tomentosae. Corymbi ad 4 cm. longi, ad 6 cm. lati, laxiusculi convexi, ramis ramulisque pedicellisque dense et adpresse fulvido-tomentosis; pedicelli sub anthesin circ. 2 mm. longi; calyx ex toto dense et adpresse albido-tomentosus; tubus circ. 3 mm. longus turbinatus, lobi triangulares circ. 1 mm. longi acutiusculi mucronulati; petala suborbicularia circ. 2.5 mm. diametro, vix unguiculata, margine minute erosula, patentia, lactea; stamina 20 corolla paullo breviora; carpidia 2; stigmata capitata. Fructus pyriformis, 4 mm. longus, apice 3 mm. latus, kermesinus, laxe villosus, calycis lobis tomentosis inflexis coronatus; pyrenae 2, plano-convexae, circ. 3.5 mm. longae, 2.5 mm. latae.

"China:—Descent to the Yangtze from the eastern boundary of the Lichiang Valley, Yunnan. Lat. 27° 15' N. Alt. 9000 ft. Shrub of 6-10 ft. Flowers creamy-white. In open thickets. July 1913." G. Forrest. No. 10,419.

"Duplicate of above in fruit. Fruits dull crimson. Sept. 1913." G. Forrest. No. 11,338.

"On the Tong Shan, Yunnan. Lat. 27° 20' N. Alt. 9000-10,000 ft. Shrub of 6-9 ft. Flowers creamy-white. Open scrub in rocky situations. July 1914." G. Forrest. No. 12,720.

A very beautiful species closely allied to *C. Henryana* and *C. salicifolia*, from which its rounded leaves well distinguish it. *C. coriacea*, Franch. is distinguished by the obovate leaves, longly cuneate at the base, and with glabrous shining upper surface.

Cotoneaster pannosa, Franch., var. **robustior**, W. W. Sm.
Var. nov.

A typo foliis majoribus ad 3 cm. longis anguste ellipticis paululum discedit.

"China:—Mekong-Yangtze divide, Yunnan. Lat. 7° 40' N. Alt. 10,000 ft. Shrub of 8 ft. Flowers creamy-white. Open situations amongst rocks. July 1914." G. Forrest. No. 12,869.

More robust than the type and with larger leaves; the plant occupies an intermediate position between *C. pannosa*, Franch. and *C. turbinata*, Craib, or rather deviates from typical *C. pannosa* in the direction of *C. turbinata*.

Cotoneaster rubens, W. W. Sm. Sp. nov.

Species ex affinitate *C. verruculosae*, Diels a qua foliis subtus tomentosis, floribus rubris recedit.

Fruticulus plus minusve prostratus ramis crassis saepe complanatis, ramulis hornotinis brevissimis pilis sordide albidis obtectis, vetustioribus cinereis ob bases petiolorum persistentes verrucosis. Folia ad 1.5 cm. longa, ad 1 cm. lata, orbicularia vel late elliptica, apice basique rotundata, obscure mucronulata, papyracea, supra cito glabrescentia nervulis 2-3 paribus impressis, infra dense fulvo-tomentosa; petioli tomentosi circ. 1 mm. longi. Flores terminales subsessiles solitarii basi foliis bracteisque circumcincti. Calycis tubus 3-4 mm. longus ovoideo-turbinatus adpresse villosus; lobi circ. 3 mm. longi late ovati apice obtusi extus medio tomentosi margine ciliati rubridi. Petala erectiuscula orbicularia circ. 4 mm. diametro rubra. Stamina 10 calycis lobos subaequantia. Carpida 2 apice dense villosula. Fructus non visus.

"China:—Mountains of the Chungtien plateau, Yunnan. Lat. 27° 30' N. Alt. 10,000 ft. Shrub of 2½-4 ft. Flowers red. Open situations amongst rocks. July 1914." G. Forrest. No. 12,663.

Cotoneaster Wardii, W. W. Sm. Sp. nov.

Species ex affinitate *C. Francheti*, Bois a qua habitu diverso, ramulis floriferis multo longioribus, foliis majoribus tomento argenteo praeditis inter alia signa differt.

Frutex 1.5-2.4 m. altus; ramuli hornotini tomento argenteo dense induti, annotini tarde glabrescentes. Folia petiolo circ. 4 mm. longo dense tomentoso praedita; stipulae lineares tomentellae petiolos fere aequantes; lamina 2.5-3.5 cm. longa, 1.5-2 cm. lata, ovata, apice acuta vel acutiuscula, saepe longiuscule mucronata, basi rotundata vel late cuneata, papyracea, supra viridis vix lucida, ad costam impressam parce pilosa ceterum glabra, infra tomento denso argenteo induta; nervi 5-6 paria supra paulo impressi subtus prominuli tomento operti. Corymbi circ. 2 cm. longi, 2.5 cm. lati, 10-15-flori, ramos circ. 4 cm. longos terminantes; rami cum pedicellis dense tomentosi; bracteae bracteolaeque lineares longiusculae; pedicelli 4-5 mm. longi. Calyx ex toto densiuscule et adpresse albido-pilosus vel tomentosus; tubus circ. 3 mm. longus turbinatus; lobi triangulares 2.5 mm. longi acuti vel acuminati; petala erecta suborbicularia fere 4 mm. diametro, breviter unguiculata, integra, alba; stamina 20 fere 3 mm. longa; carpida 2 apice dense albido-pilosula. Fructus desideratur.

"South-East Tibet:—Ka-gwr-pw temple, near the Chinese frontier, in forest at 10,000-11,000 ft. Shrub of 5-8 ft., silver-leaved. July 1913." Kingdon Ward. No. 916.

A plant akin to *C. Francheti*, Bois, but very different in habit and form of inflorescence.

Crataegus chungtienensis, W. W. Sm. Sp. nov.

Species ex affinitate *C. sanguineae*, Pallas a qua foliis minoribus basi saepius truncato-rotundatis, stipulis glanduloso-serratulis inter alia recedit.

Frutex 3.6-6 m. altus; ramuli hornotini tenues glabri vel subglabri nitenti-rubescences, annotini plus minusve cinerei; spinae rectae robustae circ. 1.5 cm. longae; gemmae rotundae perulis nitenti-brunneis glabris. Folia petiolo circ. 1 cm. longo glabro suffulta; lamina 3-5.5 cm. longa, 2-5 cm. lata, late ovata, apice ambitu plus minusve obtusa, basi truncato-rotundata vel late cuneata in petiolum alatum decurrens, serraturis rectis glanduloso-mucronatis serrata, supra medium 7-9-lobatula lobulis ovatis obtusis, membranacea ad maturitatem supra vix nitida, glabra, infra glabra vel ad axillas nervorum sparsim albo-pilosa; nervi in loborum apicem nec in sinus excurrentes, infra prominuli; stipulae ovatae vel lanceolatae, deciduae, glanduloso-serratae. Corymbi 3-4 cm. lati, multiflori glabri, bracteis sublinearibus vel spathulatis 2-3 mm. longis glanduloso-serratulis post anthesin subpersistentibus, pedicellis circ. 5 mm. longis glabris. Calycis tubus campanulatus glaber circ. 4 mm. longus lobis ovato-triangularibus vix 1 mm. superantibus tandem reflexis; petala alba circ. 5 mm. diametro; stamina 20; styli 1-2-3, basi glabri. Fructus globoso-oblongus, circ. 8 mm. longus, circ. 6 mm. latus, nitenti-ruber; pyrenae 1-3, circ. 6 mm. longae, 4 mm. latae, dorso obscure costatae, ventre hic illic excavatae.

"China:—Chungtien plateau, Yunnan. Lat. 27° 30' N. Alt. 10,000 ft. Shrub of 12-20 ft. Flowers creamy-white. Open thickets and on the margins of forests. July 1914." G. Forrest. No. 12,644.

"Chungtien plateau. Lat. 27° 55' N. Sept. 1913." G. Forrest. No. 11,318.

Crataegus oresbia, W. W. Sm. Sp. nov.

Species affinis *C. chungtienensis*, W. W. Sm. a qua primo intuitu inflorescentia dense albo-pilosa inter alia discrepat.

Frutex 6 m. altus; ramuli hornotini dense albido-patenti-pilosi, annotini glabri tandem cinerei; spinae in spec. nostr. deficientes; gemmae rotundae glabrae. Folia cum eis speciei praecedentis quoad magnitudinem formamque nervosque bene congruunt sed apice minus obtusa, petiolo densiuscule albo-piloso praedita, supra ad maturitatem sparsim albo-pilosa, subtus ad costam nervosque prominulos nervulosque pilis albidis subadpressis sparsim induta. Corymbi fructiferi ad 7 cm. lati, multiflori ramis ramulisque densissime albido-patenti-pilosis,

bracteis sublinearibus glanduloso-serratulis subpersistentibus, pedicellis circ. 7 mm. longis pilosis. Calycis tubus campanulatus patenti-pilosus lobis triangularibus acutis in fructu circ. 2 mm. longis reflexis; petala (ex reliquiis) circ. 5 mm. diametro alba; stamina 20; styli plerumque 2-3 basi glabri. Fructus vix maturus, circ. 6 mm. longus, 5 mm. latus, sparsim albo-pilosus; pyrenae 2-3, ventre excavatae.

"China:—Mountains of the Chungtien plateau, Yunnan. Lat. 27° 55' N. Alt. 10,000 ft. Shrub of 20 ft. In fruit. In open thickets. July 1913." G. Forrest. No. 10,613.

Cremanthodium gracillimum, W. W. Sm. Sp. nov.

Species affinis *Cremanthodio Decaisnei*, C. B. Clarke sed habitu gracillimo floribusque kermesinis in hoc genere facile recognoscitur.

Caulis simplex 15-20 cm. altus plus minusve sparsim fulvido-araneoso-villosus. Folia basalia 2-4 petiolo gracillimo 10-14 cm. longo praedita; lamina reniformis vel orbicularis, circ. 2.5 cm. diametro, basi cordata vel excisa, margine dentata vel crenato-dentata, dentibus 25-40 mucronulatis vel subobtusis, in sicco papyracea, utrinque primo sparsim araneoso-pubescent, deinde glabrescent; folia caulina plerumque solitaria, medio vel sub medio inserta, petiolo multo breviora praedita; sub involucri folia bracteiformia 3-5 subulata minima supposita. Capitulum seminutans: involucri phylla 12-15, circ. 1 cm. longa, circ. 3 mm. lata, lanceolata vel oblanceolata, acuta, marginibus late scariosa, extus medio araneoso-pubescentia, intus glabra. Florum ligulorum ligulae circ. 12, fere 2.5 cm. longae, apice trilobatae lobulis apiculatis, ex collectore obscure kermesinae; pappus circ. 7 mm. longus sordide albidus vel rufidulus; flores disci circ. 1.5 cm. longi stylo longe exserto incluso; tubi pars inferior filiformis circ. 2 mm. longa, pars superior cylindrica circ. 6 mm. longa. Achaenia haud matura 2 mm. aequantia.

"Upper Burma:—On moss-covered rocks, on granite cliffs in shade of dwarf rhododendrons, ridge of Naung-Chaung, Nwai divide. Flowers dull crimson. 15th July 1914." Kingdon Ward. No. 1783.

Cremanthodium Wardii, W. W. Sm. Sp. nov.

Species nana ex affinitate *Cremanthodii discoidei*, Maxim.; foliis orbicularibus floribusque albis inter alia longe differt.

Caulis simplex 8-10 cm. altus fulvo-araneoso-villosus. Folia basalia circ. 4, petiolo ad 3 cm. longo araneoso-villosulo praedita; lamina reniformis vel orbicularis, circ. 1.5 cm. diametro, basi

breviter excisa, margine dentata dentibus 12-20 mucronulatis, in sicco papyracea, utrinque sparsissime araneoso-pubescent vel glabrescens; folia caulina 2-3, secus caulem distributa petiolo longe vaginante praedita; lamina ut in foliis radicalibus; folia bracteiformia 2-3 subulata prope involucrem inserta. Capitulum nutans discoideum album. Involucri phylla 7-12, circ. 1.3 cm. longa, 3-5 mm. lata, lanceolata, acuta vel breviter acuminata, basi villosula, supra glabrescentia, ex collectore alba. Flores ligulati nulli; disci flores involucre multo breviores; tubi pars infima filiformis vix 1 mm. superans, pars superior anguste campanulata circ. 2.5 mm. longa. Pappus 3 mm. longus fragilis albus. Achaenia immatura.

"Upper Burma:—Amongst granite boulders and rocks growing in wet moss in sheltered places. Near summit of granite mountain at an elevation of 13,000 ft., ridge of Naung-Chaung, Nwai divide. Flowers pure white. July 1914." Kingdon Ward. No. 1796.

Desmodium praestans, G. Forrest. Sp. nov.

Species pulchra foliis permagnis simplicibus basi rotundato-truncatis subtus dense albido-tomentosis conspicua.

Frutex 1.2-2.7 m. altus; ramuli subteretes primo densissime molliterque albido-tomentosi, tandem glabrescentes sordide brunnei. Folia simplicia petiolo 1-2.5 cm. longo valido apice basique incrassato dense albido-tomentoso et stipulis mox deciduis linearibus 7-8 mm. longis tomentosis praedita; lamina saepe permagna, ad 22 cm. longa, ad 17 cm. lata (etiam prope inflorescentiam), nunc 5-15 cm. longa, 5-10 cm. lata, ovata vel suborbicularis, apice rotundata vel obtusa, breviter mucronata, basi truncato-rotundata vel rotundata, margine undulata, in sicco papyracea, supra pallide viridis dense molliterque incanopilosa vel -tomentosa, infra densissime albido-tomentosa; nervi 5-6 paria supra paululo eminentes conspicui, infra prominuli cum nervulis reticulum manifestum formantes. Flores purpureo-coerulei in paniculam terminalem amplam ad 27 cm. longam ad 19 cm. latam dispositi; rhachis ramosa cum ramis primariis ad 15 cm. longis dense tomentosa; bractae ovatae vel lanceolatae ad 1 cm. longae dense albo-tomentosae; pedicelli ad 1 cm. longi patenter tomentosi. Calyx circ. 4 mm. longus dense villosus in lobos ovatos obtusiusculos fere ad medium fissus. Corolla circ. 1 cm. longa glabra. Fructus (unus tantum visus) vix maturus circ. 2.5 cm. longus breviter stipitatus, articulis 4, dense adpresso-sericeus.

"China:—Mekong Valley, Yunnan. Lat. 27° 40' N. Alt. 8000 ft. Shrub of 6-9 ft. Flowers purple-blue. Dry situations amongst rock and scrub. Aug. 1914." G. Forrest. No. 13,096.

"Mountains in the N.E. of the Yangtze bend, Yunnan. Lat. 27° 45' N. Alt. 10,000 ft. Shrub of 4-8 ft. Flowers bright blue. In open scrub. July 1913." G. Forrest. No. 10,387.

"On the Chungtien plateau, Yunnan. Lat. 27° 55' N. Alt. 10,000 ft. Shrub of 6-7 ft. Flowers deep purple-blue. Open situations of the margins of thickets. Aug. 1913." G. Forrest. No. 10,918.

Dischidia cylindrica, W. W. Sm. Sp. nov.

Species ex affinitate *D. tubuliflorae*, King et Gamble a qua corollae tubo intus villosa, lobis glabris recedit.

Planta epiphytica repens caulibus tenacissimis puberulis. Folia 3.5-4 cm. longa, \pm 1.2 cm. lata, lanceolata, apice \pm acuta, basi rotundata, coriacea utrinque glabra, siccando rugosula marginibus paululo recurvis; costa gracilis basi glandula notata; petiolus 1-2 mm. longus puberulus. Umbellae pauciflorae pedunculo \pm 1 cm. longo suffultae; flores tubulosi, comparabiles solummodo eis *D. tubuliflorae*, pedicellis 1-2 mm. longis praediti. Calyx vix 2 mm. superans lobis ovatis obtusiusculis extus sparse puberulis. Corolla anguste tubulosa usque ad 1.5 cm. longa, basi urceolata, supra aequae tubulosa, extus glabra, intus parte mediana villosa fauces versus glabra; lobi circ. 2 mm. longi erecti carnosuli glabri. Coronae squamae 5 tenuissimae hyalinae supra rotundatae infra sagittatae, ex descriptione eis speciei supra citatae simillimae. Antherae erectae cellulis parallelis, appendicibus longis acuminatis supra in apiculum hyalinum cohaerentibus; alae coraeae basi caudatae; pollinia oblonga caudiculis aequilonga. Styli subulato-acuminati. Fructus deest.

"Borneo:—Near Kuching, Sarawak; a creeper in swampy country, flower yellow. April 1914." Native Collector No. 104 in Herb. Edin.

A very close ally of *D. tubuliflorae*, King and Gamble, from which it is distinguished by the corolla being villous within and the lobes glabrous. Both species are remarkable for the very elongated corolla tube.

Eriobotrya obovata, W. W. Sm. Sp. nov.

Species affinis *E. prnoidi*, Rehder et Wilson a qua foliis obovatis, petalis haud profunde emarginatis, stylis 3 stamina subaequantibus inter alia differt.

Arbor vel frutex; altitudo non nota. Ramuli hornotini ferrugineo-tomentosi, annotini grisei glabrescentes. Folia persistentia coriacea petiolo circ. 2 cm. longo glabro vel glabrescente praedita; lamina 8-11 cm. longa, 3-4.5 cm. lata, obovata vel

oblanceolata, apice rotundata ad summum ipsum abrupte breviterque acuminata, basi cuneata, dentibus incurvis sinuato-serrata, supra lucida vel sublucida glabra, infra pallidior, ad maturitatem glabra, costa media nervisque 10-14 paribus subtus eminentibus cum nervulis reticulum distinctum utrinque formantibus. Panicula terminalis, circ. 6 cm. longa, angusta, rufo-tomentosa; pedicelli 1-3 mm. longi rufo-tomentosi, ut bractee bracteolaeque sublineares caducae. Flores circ. 1.5 cm. diametro; calycis tubus turbinatus 3.5 mm. longus, rufo-villosus, lobi anguste ovati, 2 mm. longi, valde reflexi, extra rufo-villosi, intus glabri. Petala obovata, circ. 5 mm. longa, apice rotundata vel breviter emarginata, longiuscule unguiculata, ad basim tantum villosula. Stamina 20, circ. 3 mm. longa. Ovarium biloculare apice dense villosulum; styli 3, stamina subaequantes, basi villosuli, ceterum glabri, liberi vel fere liberi. Fructus deest.

China:—In the vicinity of Yunnanfu, Yunnan. Maire. No. 2450. In Herb. Edin.

A near ally of *E. prinoides*, Rehder et Wilson, but differing in the obovate leaves, in the petals and styles.

***Eriobotrya tengyuehensis*, W. W. Sm. Sp. nov.**

Species affinis *E. bengalensi*, Hook. f. a qua foliis fere integris apice tantum pauci-serratis floribus duplo majoribus inter alia recedit.

Frutex 6 m. altus vel arbor ad 18 m. alta; ramuli hornotini bene evoluti non visi, pars brevissima sub inflorescentia dense ferrugineo-tomentosa. Folia persistentia coriacea petiolo 2-3.5 cm. longo glabro vel glabrescente suffulta; lamina plerumque 12-17 cm. longa, 5-7 cm. lata, oblonga vel elliptica vel subobovata, apice abrupte breviterque acuminata, basi late cuneata, subintegra ad apicem pauci-serrata vel serrata, supra opacoviridis glabra, infra pallidior subglabra hic illic indumenti juvenilis reliquiis conspersa; costa media supra vix impressa, infra eminens, nervis 10-15 paribus ad marginem percurrentibus prominulis, reticulo supra obscuro infra manifesto. Panicula terminalis thyrsioidea in exemplis nostris subsessilis, ad 10 cm. alta, ad 15 cm. lata, dense ferrugineo-tomentosa; pedicelli 3-5 mm. longi, tomentosi ut bractee caducae. Flores circ. 2 cm. diametro lacteo-flavidi; calycis tubus breviter cupuliformis circ. 3 mm. longus extra tomentellus, lobi anguste ovati, circ. 2 mm. longi obtusiusculi patentes extra tomentelli intus glabri. Petala circ. 8 mm. longa obovata glabra. Stamina 20 circ. 5 mm. longa. Ovarium biloculare apice dense villosulum; styli 2 vel 3, circ. 3 mm. longi, ad medium vel ultro connati, longiuscule ferrugineo-villosuli. Fructus deest.

“China:—Shweli-Salween divide, Yunnan. Lat. 25° 5' N.

Alt. 7000 ft. Tree of 40–60 ft. Flowers creamy-yellow. Open forests. May 1913." G. Forrest. No. 9857.

"Machang-kai Valley, north of Tengyueh. Lat. 25° 20' N. Alt. 6000–7000 ft. Shrub of 25–40 ft. Flowers creamy-yellow, fragrant. In thickets. April 1913." G. Forrest. No. 9847.

"Hills north of Tengyueh. Lat. 25° N. Alt. 8000 ft. Shrub of 20–30 ft. Flowers creamy-yellow, fragrant. In open thickets. April 1914." G. Forrest. No. 12,298.

Erysimum bhutanicum, W. W. Sm. Sp. nov.

Species ex affinitate *E. cheiranthoidis*, Linn., *E. hieraciifolii*, Linn., et *E. repandi*, Linn. sed floribus majoribus inferioribus bracteatis, pedicellis multo longioribus inter alia recedit.

Planta annua 45–80 cm. alta. Folia radicalia non visa; superiora spatulata vel oblanceolata, in petiolum 3–4 cm. longum alatum vix discretum angustata; lamina ad 6 cm. longa, 1–1.8 cm. lata, apice acuta, basi cuneata, dentibus remotis utrinque 3–5 sinuato-denticulata, pilis adpressis bifurcatis vel trifurcatis albidis utrinque densiuscule dispersa. Inflorescentia fructifera ad 30 cm. longa; flores inferiores circ. 8 bractea foliacea foliis caulinis subsimili praediti; superiores ebracteati; bracteae superne decrescentes, tandem lineares; flores ipsi 1.3–1.5 cm. diametro, leviter fragrant; pedicelli calyce multo longiores, tandem fructiferi ad 2 cm. elongati. Sepala circ. 6 mm. longa, oblonga, subscariosa, lateralia duo gibbosa. Petali unguis calycem paululo superans, lamina late obovata, circ. 5 mm. lata, aurantiaca. Siliquae ad 7.5 cm. longae, 1.25 mm. latae, plus minusve patentes, sparsim furcato-pilosulae. Semina ovoidea circ. 1.5 mm. longa brunnea.

"Bhutan:—Shado, Timpu. Alt. 13,000 ft. Coarse herb in meadow with orange flowers. Oct. 1914." R. E. Cooper. No. 3549. (Fruiting plant only.)

Flowering specimen in Herb. Edin., cult. Bees, Ltd., from seeds of No. 3449; upper leaves and flowers.

Euonymus clivicola, W. W. Sm. Sp. nov.

Species affinis *E. porphyrae*, Loes. et *E. sanguineae*, Loes. a quibus floribus pentameris multo majoribus ad 14 mm. diametro inter alia facile distinguitur.

Frutex 6–9 m. altus; ramuli hornotini angulati glabri virides, annotini cinerascens cortice foveolato-rugosulo praediti. Folia opposita petiolo 4–5 mm. longo suffulta decidua; lamina 6–12 cm. longa, 1.5–3 cm. lata, lanceolata, apice sensim et longiuscule acuminata, basi cuneata, margine denticulis incurvis crebro serrulata, in sicco tenuiter membranacea, glabra, supra viridis infra

multo pallidior; costa media utrinque albida distincta nervis supra subobscuris infra paulo distinctioribus. Inflorescentiae 1-3-florae pedunculis gracilibus arcuatis 3-5 cm. longis suffultae; pedicelli circ. 5 mm. longi. Flores pentameri ex collectore virides 11-14 mm. diametro; sepala reniformia circ. 1.5 mm. diametro; petala orbicularia vel ovalia 4-5.5 mm. longa (in sicco tenuissime membranacea albida); fructus deest.

"China:—On the Tong Shan, Yunnan. Lat. 27° 20' N. Alt. 9000 ft. Shrub of 20-30 ft. Flowers green. In open thickets. July 1914." G. Forrest. No. 12,690.

A slender shrub, well distinguished amongst its immediate deciduous allies by the longly lanceolate leaves and the large pentamerous flowers.

***Euonymus decora*, W. W. Sm. Sp. nov.**

Species alternifolia tantum cum *E. yunnanensi*, Franch. comparabilis, a qua habitu arboreo, foliis latioribus inter alia divergit.

Arbor 9-12 m. alta; ramuli hornotini angulati pallido-cinerei glabri. Folia alterna petiolo 4-7 mm. longo glabro praedita; lamina plerumque 3.5-5 cm. longa, 2.5-3 cm. lata, ovalis vel late obovata, apice obtusa vel rotundata ad summum ipsum breviter apiculato-acutata, basi late cuneata vel rotundata, margine denticulis vel serraturis minutis remotis notata fere integra, coriacea, glabra, supra laete viridis elevato-reticulata, infra subglauca. Flores non visi sed ex vestigiis pentameri; pedunculi fructiferi foliis longiores, initio 1-3-flori; pedicelli ad 1.5 cm. longi; sepala ovata vel rotundata 3 mm. longa; staminum filamenta 3 mm. longa, antherae 1.5 mm. longae. Capsula quoad formam atque dehiscenciam similis ei *E. grandiflorae*, Wall. sed multo major et pentamera, circ. 2 cm. longa; valvulae 6-8 mm. latae; semina in quoque loculo 1-2, oblonga, 8-10 mm. longa, circ. 3 mm. lata, rubro-purpurea, arillo aurantiaco semi-inclusa.

"China:—Ghi Shan, east of Tali Lake, Yunnan. Lat. 25° 40' N. Alt. 7000 ft. Tree of 30-40 ft. In open thickets, in fruit. Aug. 1914." G. Forrest. No. 13,529.

In many points this species comes very near *E. yunnanensis*, Franch., which I have not seen. It is described as a small shrub of 3-4 feet. Besides the arboreal habit, *E. decora* differs in the shorter but broader leaves, broadly cuneate at the base. Both plants are found near Tali. Unfortunately for purposes of close comparison, Delavay's specimen is in flower only, Forrest's in fruit.

Euonymus lichiangensis, W. W. Sm. Sp. nov.

E. linearifolia, Forrest nec Franch. in Notes R.B.G. Edin., vii (1912), 81, 134.

Species haec ab *E. linearifolia*, Franch. foliis oppositis nec alternis nec verticillatis, floribus tetrameris inter alia facile distinguitur; affinis est *E. nanoides*, Loes. et Rehd. quae foliis minoribus ad costam nervosque minute hirtulis differt; *E. nana*, Bieb. foliis alternis vel verticillatis recedit.

Frutex 0.6–2.4 m. altus erectus virgatim ramosus; ramuli hornotini quadrangulati, lineis albidis subquadrialati, lenticellis lepidiformibus minute et densissime verruculosi, tenues glabri virides; annotini subsimiles virides. Folia fere sessilia petiolo nunc fere ad 1 mm. longo nunc obsolescente praedita, opposita, persistentia; lamina linearis plerumque 3–5 cm. longa, 2–3 mm. lata, apice acuta et breviter apiculata, margine remote et subobsolete denticulata, in sicco papyracea, utrinque glabra, supra viridis, subtus vix pallidior. Cymae axillares 1–3-florae raro 5-florae saepe prope basim ramulorum novorum plus minusve aggregatae et ex axillis foliorum squamiformium ortae glabrae; pedunculi ad 1 cm. longi, pedicelli ad 5 mm., bracteae circ. 1 mm. subulatae rubescentes. Flores virides circ. 7 mm. diametro; sepala ovata circ. 1 mm. longa; petala ovata circ. 2 mm. longa. Stamina filamenta breviter antheris paulo longiora. Ovarium in discum immersum. Capsula 4-mera, obpyramidata, lobata, dorso loborum paululo costato, apice subintrusa, circ. 1 cm. longa, 1.2–1.3 cm. lata, rubescens; semina solitaria purpurea arillo fere ex toto occlusa.

“China:—Shady situations in dense pine forests on the eastern flank of the Lichiang Peak, Yunnan. Lat. 27° 30' N. Alt. 9000–10,000 ft. Sept. 1904.” G. Forrest. No. 1125.

“Very shady moist situations in pine forests on the eastern flank of the Lichiang Range. Lat. 27° 25' N. Alt. 11,000 ft. Shrub of 4–8 ft. Flowers green. June 1906.” G. Forrest. No. 2475.

“Open situations amongst scrub and in pine forests on the eastern flank of the Lichiang Range. Lat. 27° 15' N. Alt. 10,000–11,000 ft. Shrub of 2–4 ft. Flowers green. May 1910.” G. Forrest. No. 5620.

The above specimens from the Lichiang Range were at first identified as *E. linearifolia*, Franch. But the latter, according to Franchet, has alternate leaves 6–10 cm. long and pentamerous flowers. The species is much nearer *E. nana*, Bieb.

Euonymus Monbeigii, W. W. Sm. Sp. nov.

Species valde affinis *E. Giraldui*, Loes. et *E. sanguineae*, Loes. a quibus inflorescentiis praelongis effusis folia saepe duplo superantibus distinguitur; haud procul ab *E. dasydictyone*, Loes. et Rehd. quae e descriptione foliis basi cuneatis pedunculis multo brevioribus divergit.

Frutex 3-8 m. altus vel fortasse arbor ad 12 m.; ramuli hornotini angulati glabri virides, annotini cinerascens vel brunnei. Folia opposita petiolo circ. 1 cm. longo breviter alato glabro praedita decidua; lamina plerumque 5-7 cm. longa, 3-4 cm. lata, ovata vel ovato-elliptica, apice acuta vel breviter acuminata, basi rotundata vel late cuneata, margine denticulis incurvis crebro serrulata, membranacea vel subchartacea, supra atroviridis glabra venis venulisque ultimis sub lente minutissime puberulo-asperulatis itaque subconspicuis, infra olivacea glabra nervis utrinque 5-6 paribus. Inflorescentiae ad 10-12 cm. longae ter quaterve divisae effusae glabrae; pedunculus 6-7 cm. longus apice plerumque in ramulos quinque divisus, gracilis sed tamen rigidulus; pedicelli ultimi 2-4 mm. longi. Flores tetrameri virides; sepala orbicularia 1 mm. diametro; petala oblanceolata vel lanceolata, circ. 3 mm. longa, acuta vel obtusiuscula. Fructus cruciatim 4-alatus teste specimine Wardiano sub n. 697 fructu immaturo; si schedae Forrestianae sub n. 12,930, 13,447, huc recte allocatae, fructus maturus ei *E. sanguineae* similis sed alis brevioribus praeditus.

China:—N.W. Yunnan. 1907. Monbeig. No. 58 (type).

Tseku, N.W. Yunnan. May. Monbeig. No. 3 (1912).

"N.W. Yunnan, near Atuntsu. 10,000-13,000 ft. Small tree of 15-20 ft. in shrub belt. June-July 1913." F. Kingdon Ward. Nos. 351, 474, 697.

The following also appear to belong here, the first very young, the others in mature fruit:—

"Chungtien plateau, Yunnan. Lat. 27° 30' N. Alt. 9000 ft. Shrub of 12-25 ft. Flowers green. In open situations amongst rocks. April 1914." G. Forrest. No. 12,436.

"Mekong Valley, Yunnan. Lat. 27° 40' N. Alt. 10,000 ft. Shrub of 20-30 ft. Is found in open thickets. Aug. 1914." G. Forrest. No. 12,930.

"Mekong-Salween divide, Yunnan. Lat. 28° 16' N. Shrub of 20 ft. Fruits scarlet. In open thickets and pine forests. Oct. 1914." G. Forrest. No. 13,447.

Euonymus oresbia, W. W. Sm. Sp. nov.

Species affinis *E. lichiangensi*, W. W. Sm. a qua foliis minoribus oblanceolatis crebro serratulis inter alia differt; *E. nanoides*,

Loes. et Rehd., *E. Przewalskii*, Maxim., *E. saxicola*, Loes. et Rehd. sunt affines sed foliorum characteribus satis distant.

Frutex 1-2 m. altus erectus patentim atque virgatim ramosus; ramuli hornotini quadrati crassiusculi virides glabri lenticellis minimis papilloso; annotini virides ad angulos decorticantes. Folia petiolo glabro circ. 1 mm. longo suffulta, opposita, subpersistentia?; lamina anguste oblanceolata, circ. 2 cm. longa, paulo supra medium latissimum ibique 4-5 mm. lata, apice obtusiuscula, basi cuneata, margine crebro serrulata, in sicco papyracea, utrinque glabra atque subconcolor. Cymae axillares 1-3-florae; pedunculi fructiferi plus minusve 5 mm. longi. Flores (vestigia tantum) 4-meri; sepala circ. 1 mm. longa rotundo-ovata; staminum filamenta brevissima circ. 1 mm. longa. Capsula 4-mera, obpyramidata, ita lobata ut cruciformis ab vertice videatur, circ. 7-8 mm. longa, circ. 1.1 cm. lata, lobulis triangularibus 4 mm. longis; semina in quoque loculo solitaria.

"China:—Mountains of the Chungtien plateau, S.E. of Chungtien, Yunnan. Lat. 27° 55' N. Alt. 10,000-11,000 ft. Shrub of 3-6 ft. In fruit, in open thickets. July 1913." G. Forrest. No. 10,453.

***Euonymus pygmaea*, W. W. Sm. Sp. nov.**

Species habitu nano, caule simplici vel infra pauciramoso, aliquatenus radicante, foliis paucis deciduis ellipticis bene notata; affinitas dubia; cum *E. Giraldui*, Loes. ejusque sociis fortasse collocari potest.

Fruticulus in scheda 18-30 cm. altus, ex collectore ad 68 cm. attingens; caulis inferior aliquatenus radicans, superior viridis glaber, simplex vel pauciramossus. Folia opposita petiolo 6-7 mm. longo glabro suffulta decidua pauca saepius 2-4 tantum ad apicem plantae evoluta; lamina vulgo 6-8 cm. longa, 2-3 cm. lata, elliptica, apice obtuse angustata vel subrotundata, basi cuneata, margine crebro indurato-serrulata, in sicco submembranacea, utrinque glabra, supra viridis, subtus pallido-viridis, nervis 8-10 paribus in sicco subconspicuis. Inflorescentiae plerumque circ. 3, ex axillis foliorum delapsorum (minimorum vel squamiformium) ortae, 3-7-florae; pedunculi graciles 2-3 cm. longi glabri; pedicelli 1 cm. longi; flores desunt sed ex vestigiis tetrameri sepalis rotundatis 1 mm. diametro. Capsula 4-mera, subglobosa alis 2-3 mm. latis quadrialata, 1-1.2 cm. diametro (submatura); loculi saepe 1-2 tantum seminiferi; semina disciformia (forsan siccando paulo complanata) circ. 6 mm. diametro arillo aurantiaco inclusa.

"China:—Western flank of the Shweli-Salween divide, Yunnan. Lat. 25° 20' N. Alt. 7000-8000 ft. Dwarf shrub

of 1-2 ft. In fruit. Open rocky pasture. Aug. 1912." G. Forrest. No. 8961.

Euonymus rostrata, W. W. Sm. Sp. nov.

Species proxima *E. Forbesianae*, Loes. a qua foliis lanceolatis sensim acuminatis supra medium tantum remote serrulatis, inflorescentiis numerosioribus recedit.

Frutex 6 m. altus. Folia opposita petiolo 3-5 mm. longo suffulta persistentia; lamina 7-9 cm. longa, 2-2.7 cm. lata, lanceolata vel elliptico-lanceolata, apice in acumen obtusiusculum sensim caudato-attenuata, basi cuneata, margine parte inferiore integra, parte superiore remotiuscule serrulata, subcoriacea, glabra, supra olivacea, subtus pallidior, nervis utrinque fere obsoletis. Inflorescentiae 1-4-natae plerumque bis divisae; flores cum eis *E. Forbesianae*, Loes. bene congruunt. Fructus deest.

"China:—Shweli-Salween divide, Yunnan. Lat. 25° 30' N. Alt. 9000 ft. Shrub of 20 ft. Flowers dull greenish-yellow. In open situations in thickets. June 1913." G. Forrest. No. 11,851.

This is perhaps only a variety of *E. Forbesiana*, Loes. differing in the lanceolate leaves with a gradually acuminate apex and with a few remote teeth in the upper half; the leaf of *E. Forbesiana* is densely serrulate. The plant appears to be intermediate between the Yunnan *E. Forbesiana* and the entire-leaved Khasian *E. attenuata*, Wall.

Euonymus tengyuehensis, W. W. Sm. Sp. nov.

Species ex affinitate *E. hupehensis*, Loes. et *E. theifoliae*, Wall.; ramulis dense verruculosus, foliis magis coriaceis latioribus undulatim serrato-crenatis, reticulo nervulorum utrinque conspicuo, pedunculis ad 8 cm. longis, inflorescentiis sexties divaricato-divisis, floribus majoribus bene notata.

Frutex 1-2 m. altus, nonnunquam ad 9 m. attingens; ramuli subquadrati virides dense verruculosi et corrugati. Folia opposita petiolo circ. 1 cm. longo crasso praedita plus minusve coriacea persistentia; lamina 9-12 cm. longa, 3-6 cm. lata, elliptica vel elliptico-oblonga, rarius ovato-lanceolata, apice acuta vel breviter acuminata, raro rotundata, basi plerumque rotundata, rarius late cuneata, margine undulatim obtuseque serrato-crenata, nonnunquam remotiuscule serratula, utrinque glabra, supra atroviridis primo plus minusve lucida, infra pallido-olivacea; nervi primarii 5-7 paria nervulique utrinque reticulum conspicuum formantes. Inflorescentiae amplae saepius sexties divaricato-divisae; pedunculus ad 8 cm. longus quadrangulus

dense verruculosus, ramulis ad ultimos rigidiusculis angulatis, bracteis numerosis lanceolatis vel subulatis. Flores tetrameri 8-9 mm. diametro pallido-flavi; sepala reniformia circ. 1 mm. diametro; petala suborbicularia breviter lateque unguiculata, circ. 3 mm. longa; filamenta antheras paulo superantia. Fructus 4-merus vix maturus globosus haud alatus circ. 9 mm. diametro; semina solitaria purpurea arillo aurantiaco inclusa.

"China:—Hills to the N.W. of Tengyueh, Yunnan. Lat. 25° 10' N. Alt. 6000-7000 ft. Shrub of 3-5 ft. Flowers greenish-yellow. Open situations amongst scrub. Nov. 1912." G. Forrest. No. 9313.

"Divide between the Shweli and Tengyueh Valleys. Lat. 25° N. Alt. 7000 ft. Shrub of 6-8 ft. In fruit. Open situations. July 1912." G. Forrest. No. 8658.

"Shweli Valley, Yunnan. Lat. 25° 20' N. Alt. 6000 ft. Shrub of 30 ft. Flowers creamy-white. In open thickets. July 1913." G. Forrest. No. 11,937.

This species is closely akin to *E. hupehensis*, Loes., especially to the variety *longipedunculata*, Loes.

Euonymus Wardii, W. W. Sm. Sp. nov.

Species ex affinitate *E. myrianthae*, Hemsl. sed foliis caudato-acuminatis, pedunculis gracillimis praelongis bene notata.

Frutex 2-3.5 m. altus; ramuli glabri pallido-virides. Folia opposita petiolo 1-1.2 cm. longo anguste alato glabro praedita persistentia; lamina 11-17 cm. longa, 4-6 cm. lata, obovata vel oblanceolata, apice acumine 1.5-3 cm. longo acuto vel obtusiusculo caudato-acuminata, basi latiuscule cuneata, margine indurato-serrulata, in sicco papyracea, utrinque glabra, supra primo lucida mox opaca pallido-viridis, subtus paulo pallidior, nervis in sicco subconspicuis primariis 6-7 paribus. Inflorescentiae circ. 15-florae ex axillis foliorum delapsorum (squamiformium?) inter paria duo foliorum hornotinorum ortae, oppositae, ter dichotome furcatae; pedunculi arcuati gracillimi glabri, primarii 7-8 cm. longi, secundarii circ. 3 cm. longi; pedicelli circ. 1 cm. longi. Flores tetrameri; sepala suborbicularia circ. 2 mm. diametro; petala late ovata vel suborbicularia 5 mm. longa; stamina fere sessilia; fructus deest.

"Burma:—At Htawgaw, valley of Naung-Chaung, Lashi country, East Upper Burma. Small shrub of loose habit, 8-12 ft. Flowers greenish. Damp shady gullies in forest. May 1914." F. Kingdon Ward. No. 1543.

Quite unlike any *Euonymus* recorded from Burma.

Evodia vestita, W. W. Sm. Sp. nov.

Species sectionis *Oxyactis*, Rehder et Wilson, ex affinitate *E. Henryi*, Dode et *E. hupehensis*, Dode a quibus foliis subtus velutinis inter alia differt; ab *E. velutina*, Rehder et Wilson inflorescentiis subsessilibus, carpellis longe rostratis recedit.

Frutex 6-8 m. altus. Ramuli hornotini dense fulvido- vel ferrugineo-velutini. Folia 3-4-juga, cum petiolo ad 35 cm. longa; petioli 2-7 cm. longi ut rhachis dense velutini; foliola petiolulo 2-7 mm. longo suffulta, ad 13.5 cm. longa, ad 5 cm. lata, ovato-lanceolata vel oblongo-lanceolata, apice plerumque acuminata acumine ipso obtusiusculo vel acutiusculo, basi rotundata vel late cuneata, minute crenulata, supra obscure viridia infra cinerea, supra sparsim pilosula glabrescentia, ad costam paulo densius, infra ex toto dense molliterque villosa; nervi utrinque 10-12. Flores desunt. Inflorescentia fructifera subsessilis, late et dense paniculata, ad 8 cm. alta, ad 10 cm. lata, ramis ramulisque dense velutinis. Fructus brunneus ad 7 mm. altus, sparsim villosus; carpella 4-5, erecto-patentia obovata acumine circ. 3 mm. longo praedita intus villosula; semina in quoque loculo duo inaequalia, majora fere 4 mm. longa, superposita, nitentia, nigra.

"China:—On the Tong Shan in the Yangtze bend, Yunnan. Lat. 27° 20' N. Alt. 9000-10,000 ft. Shrub of 20-30 ft. In fruit. In open thickets. Sept. 1913." G. Forrest. No. 11,091.

This species is very closely allied to *E. velutina*, Rehder et Wilson, but differs in the subsessile inflorescence and long-beaked carpels.

Gymnosporia berberoides, W. W. Sm. Sp. nov.

Species affinis *G. variabili*, Hemsl. a qua ramulis minute glanduloso-puberulis, foliis minoribus obovatis ad costam minute puberulis inter alia abunde discrepat.

Frutex 1-2 m. altus ramulis primo paulo complanatis minute glanduloso-puberulis, annotinis cinerascentibus tarde glabrescentibus; spinae circ. 1 cm. longae magnitudine formaque eis *Crataegi oxyacanthae*, Linn. subsimiles. Folia alterna petiolo 2-3 mm. longo minute puberulo suffulta; lamina in spec. florifero 2-3 cm. longa, 1-1.5 cm. lata, in spec. fructifero major ad 4.5 cm. longa, ad 3.5 cm. lata, obovata, apice rotundata saepe emarginata, basi cuneata, margine subregulariter serrulata, in sicco tenuiter papyracea, supra atroviridis sublucida, infra pallidior, utrinque ad costam nervosque minute puberulo-asperata, reticulo nervorum utrinque plus minusve conspicuo. Flores in cymulas 3-5-floras dispositi; pedunculi circ. 2 cm. longi graciles sparsim puberuli vel glabri; pedicelli circ. 5 mm.

longi; bracteae minutae subulatae. Sepala 5, ovata, obtusiuscula, circ. 2 mm. longa, glanduloso-ciliata. Petala ovato-lanceolata, obtusa, circ. 4 mm. longa. Stamina 5 filamentis 2 mm. longis sub discum insertis. Ovarium conoideum circ. 2 mm. longum stylo brevi stigmate trilobo coronatum. Fructus maturus fere 1 cm. longus trilocularis, loculis unispermis, seminibus brunneis circ. 5 mm. longis arillo pallido basi cinctis.

"China:—Mountains in the N.E. of the Yangtze bend, Yunnan. Lat. $27^{\circ} 45'$ N. Alt. 9000 ft. Spinous shrub of 3-4 ft. Flowers pale yellow. Dry open situations amongst boulders. Aug. 1913." G. Forrest. No. 10,738.

"Yung-pe Mountains, Yunnan. Lat. $26^{\circ} 45'$ N. Alt. 9000 ft. Spinous shrub of 3-6 ft. In fruit. Capsules pale yellow, seeds brown. Open dry situations. Sept. 1913." G. Forrest. No. 11,387.

Hemerocallis nana, G. Forrest et W. W. Sm.

Species affinis *H. fulvae*, Linn. var. *angustifoliae*, Baker a qua habitu nano, floribus solitariis vel binis anguste cylindricis segmentis angustissimis recedit.

Planta 25-50 cm. alta. Caulis reliquiis foliorum praeteritorum fibrosis basi dense circumdatus. Folia 8-12 cm. longa, 4-6 mm. lata, linearia, obtusiuscule acuminata. Flores solitarii vel bini rubicundo-aurantiaci pedunculo 4-12 cm. longo suffulti; pedicelli circ. 1 cm. longi; bracteae membranaceae ovatae vel lineari-lanceolatae. Perianthium plus minusve 6 cm. longum; tubus 1 cm. paulo superans, in limbum sensim ampliatus; segmenta exteriora linearia fere 5 cm. longa, 4-5 mm. lata, apice rubescentia, interiora paulo breviora tenuissima. Fructus immaturus in sicco 1.5 cm. longus, circ. 1 cm. latus.

"China:—Mountains in the N.E. of the Yangtze bend, Yunnan. Lat. $27^{\circ} 45'$ N. Alt. 10,000-11,000 ft. Plant of 5-10 inches. Flowers deep-red orange. Open stony pastures. July 1913." G. Forrest. No. 10,539.

A pretty dwarf species remarkable for the solitary or binate flowers with very narrow segments to the perianth, which itself shows very little dilation at the limb.

Hydrangea dumicola, W. W. Sm. Sp. nov.

Species sectionis *Heteromallae* ex affinitate *Hydrangeae pubinervis*, Rehd. et *H. Bretschneideri*, Dippel a quibus foliorum forma indumentoque inter alia longe differt.

Frutex 3-5 m. altus ramulis junioribus dense rufo-crispato-scabridulis, vetustioribus tarde glabrescentibus. Folia superiora tantum visa, 10-20 cm. longa, 7-14 cm. lata, latissime ovata

ad ovato-lanceolata, apice acuta vel modice acuminata, basi plerumque plus minusve rotundata, crebre serrato-denticulata, in sicco papyracea, supra viridia glabra, infra pallidiora ad costam nervosque nervulosque ultimos pilis acicularibus albidis subscabride obsita; petioli robusti 3-4 cm. longi crispato-scabriduli. Cyma convexa e radiis 5-7 approximatis composita 25-30 cm. diametro dense crispato-scabridula; pedicelli ultimi strigoso-scabriduli; flores radiantes 3-4.5 cm. diametro, sepalis 4 late ovalibus vel ovatis. Calycis dentes (florum fertilium) triangulares vix 1 mm. aequantes glabri. Petala oblonga circ. 2 mm. longa pallido-flavida. Stamina inaequalia, majora corollam paulo superantia, minora petalis breviora; antherae violaceae. Ovarium semisuperum stylis 3 erectis coronatum. Capsula ovoidea cum stylis persistentibus circ. 4 mm. longa, 2.5 mm. lata; semina fusiformia 1 mm. paulo superantia apice basique in alam protracta brunnea.

"West China:—Shrub of 10-15 ft. Sterile florets pale yellow, fertile florets same with violet anthers. Open situations in thickets in the Mingkwong Valley, Yunnan. Lat. 25° 20' N. Alt. 6500-7000 ft. July 1912." G. Forrest. No. 8705.

"Shrub of 10-15 ft. Fertile florets dull yellow, anthers soft lavender. Sterile florets light yellow. Open situations amongst scrub in the Mingkwong Valley. Lat. 25° 20' N. Alt. 6000-7000 ft. June 1912." G. Forrest. No. 8391.

Near Tengyueh, Yunnan, West China. Howell. No. 51.

A robust species with large leaves and ample inflorescence. The under surface of the leaves is covered almost entirely with white needle-like hairs which follow the venation up to the ultimate reticulations. The character of this indumentum marks it off very easily from the other members of the section.

***Ilex atrata*, W. W. Sm. Sp. nov.**

Species affinis *I. sikkimensi*, King a qua perulis albo-ciliatis, costa media subtus dense fulvo-tomentosa, calyce plerumque 5-mero, fructibus scarlatinis saepius 5-pyrenis inter alia recognoscitur.

Arbor usque 6-metralis. Ramuli hornotini 4-6 mm. crassi glabri striato-sulcati. Gemmae circ. 2 cm. longae perulis magnis ovatis 1-1.5 cm. longis margine longiuscule albo-ciliatis obtectae. Folia in alterum annum in ramulis remanentia petiolo 2-3 cm. longo ad 3 mm. lato alato praedita; lamina vulgo 12-15 cm. longa, 4-5 cm. lata, plus minusve elliptica, apice mediocriter acuminata, basi rotundata vel late cuneata, margine in sicco paulo recurvata minute et densissime serrulata, tenuiter coriacea supra glabra nitida atroviridis, subtus vix pallidior ad costam dense fulvo-tomentosa caeterum glabra, costa media

supra plana infra eminente, nervis utrinque 12-15 in sicco distincte reticulatis. Inflorescentiae ♀ 1-3-florae pedunculis 3-5 mm. longis, pedicellis (in fructu) 5-8 mm. longis. Calyx (explanatus) ad 4 mm. diametro lobis ovatis obsolete ciliolatis. Corolla staminaque non visa. Drupa globosa stigmatibus planodiscoideo coronata, circ. 6 mm. diametro, in vivo (ex Forrest) scarlatina, in sicco nigro-brunnescent, vulgo 4-5-pyrena, pyrenis trigonis dorso convexis ad 5.5 mm. longis ad 2.5 mm. latis.

"China:—Hills to the N.E. of Tengyueh, Yunnan. Lat. 25° 12' N. Alt. 7000-8000 ft. Shrub of 20 ft. In thickets. Fruits bright scarlet. Dec. 1912." G. Forrest. No. 9414.

***Ilex crenata*, Thunb., var. *scoriarum*, W. W. Sm. Var. nov.**

A typo statura majore (ad 4 m.), ramulis minute et dense pubescentibus, foliis plerumque majoribus 3.5-5 cm. longis tenuiter coriaceis altius crenulatis, inflorescentiis ♂ saepius 3-7-floris divergit; haud procul ab *I. Thomsoni*, Hook. f. quae a cl. Loesener pro varietate *I. crenatae* habetur.

"China:—West of Tengyueh, Yunnan. Lat. 25° N. Alt. 5000 ft. Shrub of 8-12 ft. Flowers green. In thickets on the outskirts of lava-bed. May 1912." G. Forrest. No. 7867.

"Flank of volcanic mountain to the west of Tengyueh. Alt. 7000 ft. June 1912." G. Forrest. No. 8113.

Forrest No. 8338 from same locality is probably the same. An unnamed sheet of Henry, No. 11,303, collected on mountains north of Mengtshu, at 9000 ft. a shrub of 10 ft., in fruit is, I believe, the same. Its leaves attain a length of 7.5 cm., much in excess of those of typical *I. crenata*.

This Yunnan plant appears to be intermediate in its character between the Japanese *I. crenata* and the Sikkim and Khasian *I. Thomsoni*. It does not match either exactly.

***Ilex dipyrena*, Wall., var. *connexiva*, W. W. Sm. Var. nov.**

A typo atque var. *paucispinosa*, Loes. foliis basi cuneatis margine integerrimis recedit; *I. Clarkei*, Loes. species manipurensis valde affinis foliis longius petiolatis differt.

"China:—Chungtien plateau, Yunnan. Lat. 27° 30' N. Alt. 10,000 ft. Shrub of 10-15 ft. In fruit. Open situations amongst rocks. June 1914." G. Forrest. No. 12,528.

This variety appears to form a connecting-link between the less spinose forms of *I. dipyrena*, Wall. and the entire-leaved *I. Clarkei*, Loes. The latter is regarded by Loesener himself as possibly a variety of *I. dipyrena*. The present variety is scarcely equivalent to the Manipur plant, and is nearer it than to any form of *I. dipyrena*. The fruit has two to three pyrenes.

Illigera Henryi, W. W. Sm. Sp. nov.

Species affinis *I. trifoliatae*, Dunn, sed fructibus praemagnis fere 12 cm. latis facile recognoscenda.

Frutex alte scandens. Caulis striatus cito glabrescens. Folia trifoliolata, petiolo 8–12 cm. longo glabro suffulta; petioluli 2.5–3.5 cm. longi; foliola plus minusve elliptica, 8–13 cm. longa, 5–7 cm. lata, papyracea, apice breviter atque abrupte acuminata, basi plus minusve rotundata, utrinque glabra minute papillosa. Flores in cymas longiuscule pedunculatas folia superantes primo dense fulvo-tomentellas compositi. Calycis tubus circ. 4 mm. longus dense tomentellus; lobi 11–12 mm. longi, 2–3 mm. lati, lineari-oblongi, utrinque pubescentes. Petala sepalis similia paululo breviora. Stamina circ. 6 mm. longa, filamentis pilosulis, antheris fere 3 mm. longis, nectariis tubulosus circ. 3 mm. longis parte superiore ovato-cupularibus, glandulis disci denticulatis. Stylus circ. 7 mm. longus stigmate undulato-dilatato. Fructus tetrapterus ad 12 cm. latus, ad 5 cm. longus, subglaber, alis majoribus 6 cm. latis, minoribus 2 cm. latis.

"China:—Yunnan, near Mengtsz, S.E. mountain forests. 5000 ft. Large climber. Henry." Nos. 11,402, 11,043.

Illigera mollissima, W. W. Sm. Sp. nov.

Species affinis *I. cordatae*, Dunn, sed foliis supra subscabridis infra dense pilosis, fructibus pilosulis aliter alatis recedit.

Frutex alte scandens. Caulis striatus albido- vel fulvido-pilosus tarde glabrescens. Folia trifoliolata, petiolo 8–12 cm. longo molliter piloso suffulta; petioluli 1.5–4 cm. longi; foliola late elliptica vel ovata vel suborbicularia, 4.5–12 cm. longa, 4–8 cm. lata, crasse papyracea, apice breviter atque abrupte acuminata, basi cordata, supra subscabride pilosa infra dense molliterque albido- vel fulvido-pilosa. Flores in cymas pedunculatas foliis breviores molliter pilosas compositi; flores ipsi non visi. Fructus tetrapterus 3.5–4.5 cm. latus, circ. 2.5 cm. longus, molliter pilosulus alis lateralibus circ. 2 cm. latis pilosulis, alis caeteris 5–7 mm. vix superantibus.

"China:—Mountains in the N.E. of the Yangtze bend, Yunnan. Lat. 27° 45' N. Alt. 10,000 ft. Scandent shrub of 30 ft. In fruit. On trees and scrub in open situations. Aug. 1913." G. Forrest. No. 10,770.

Indigofera mekongensis, Jesson.

I. nigrescenti, Kurz arcte affinis, sed racemis brevioribus, calycis lobis longioribus, facile distinguenda.

Caules virides pilis sparsis brunneis instructi, ad 3 m. alti in cultura, basi 1–1.5 cm. diametro. Folia 17–25-foliolata, 16–19

cm. longa; petioli 2.5–3 cm. longi, ut rhachis supra canaliculati et pilis brunneis adpressis instructi; stipulae deciduae, ad 5 mm. longae, pubescentes; petioluli 2 mm. longi, pilis brunneis adpressis densius tecti; stipellae 1 mm. longae, persistentes; foliola saepissime opposita, 2–2.5 cm. longa, 10–12 mm. lata, oblonga vel rarius obovato-oblonga, apice rotundata truncatave, emarginulata, mucronata, basi late cuneata, tenuiter membranacea, pagina superiore pilis albidis inferiore pilis albidis et brunneis intermixtis adpressis instructa, nervis lateralibus circiter 8, supra inconspicuis, subtus subconspicuis. Racemi circiter 10 cm. longi, foliis conspicue breviores, pedunculo communi 1.5–2.5 cm. longo cum rhachi ut caule pubescente suffulti; pedicelli 0.5 mm. longi; bractee angustae, circa 3 mm. longae deciduae; flores pallide rosei. Calycis adpresse fusco-brunneo-pubescentis tubus 1 mm. longus, lobi 1 mm. longi. Vexillum obovatum, 5 mm. longum, 4 mm. latum, dorso pilis adpressis densius tectum; alae 7 mm. longae, 2 mm. latae; carina 5 mm. longa, 2 mm. lata, obtusa.

China:—Mekong Valley, Yunnan. Cultivated in the Royal Botanic Garden, Edinburgh, from seed collected by G. Forrest. Not a decorative plant.

Justicia siccania, W. W. Sm. Sp. nov.

Species haec ex affinitate *J. quadrifariae*, Wall. esse videtur sed ab omnibus sectionis Calophanoidis speciebus facile distinguitur.

Fruticulus prostratus circ. 60 cm. longus; caules e basi crasse lignosa orientes numerosi tortuosi flexiles paulo intertexti primo dense cinereo-tomentelli tandem glabri cortice griseo rugoso vel verruculoso. Folia petiolo 3–8 mm. longo villosulo praedita; lamina 1.5–4 cm. longa, 1–2 cm. lata, ovata vel lanceolata, apice rotundata vel obtusa vel subacuta, basi cuneata, utrinque sparsim vel subdense appresso-pilosula, in sicco, membranacea. Flores inter parvos vix 1.5 cm. longi axillares plerumque solitarii vel bini paniculam vel spicam haud formantes; pedicelli circ. 3 mm. longi cinereo-pubescentes, ut bractee bracteolaeque 2–3 mm. longae. Calyx circ. 7 mm. longus in lobos 5 sublineares partitus pubescens. Corollae albae roseo-suffusae circ. 1.3 cm. longae extus puberulae tubus limbum subaequans rectus a basi ampliatus; limbi labium posticum breviter bifidum, anticum trilobum lobis brevissimis rotundatis. Stamina 2 filamentis supra glabris prope insertionem albo-villosulis, antherarum loculis inferioribus albo-calcaratis. Stylus inclusus albo-pilosulus; ovarium glabrum seminibus (vix maturis) complanatis.

China:—Mekong Valley, Yunnan. Lat. 27° 40' N. Alt.

7000 ft. Prostrate shrub of 2 ft. Flowers white, flushed rose exterior. Open dry situations. Aug. 1914." G. Forrest. No. 13,118.

Lespedeza (Campylotropis) atrokermesina, G. Forrest.

Species pulcherrima foliis subtus argenteo-tomentellis, floribus atrokermesinis bene notata.

Frutex 1.2-1.8 m. altus erectus ramis virgatis angulatis tomento brevi subargenteo adpresso dense indutis. Folia stipulis lineari-lanceolatis acuminatis circ. 5 mm. longis sericeo-tomentellis et petiolo ad 2.5 cm. longo dense sericeo-tomentello praedita; foliola 3, terminale aliis paulo majus; petiolulus medianus ad 1.5 cm. longus cum lateralibus 2-3 mm. longis dense sericeo-tomentellus; lamina foliolorum 2.5-6 cm. longa, 2-4 cm. lata, elliptica vel obovata, apice rotundata, saepe alte emarginata, mucrone 1-2 mm. longo sericeo praedita, basi rotundata, in sicco chartacea, supra pallide viridis glabra, infra sericeo-argenteo-tomentella, costa media supra impressa subtus prominente sericea, nervis nervulisque utrinque pulchre et conspicuo reticulatis. Racemi axillares et terminales ad 10 cm. longi, simplices vel ramulum singulum exhibentes, dense sericei, inflorescentiam terminalem 16 cm. longam 12 cm. latam formantes; bracteae stipulis similes; pedicelli circ. 4 mm. longi cum bracteolis linearibus 2 mm. longis dense sericei. Calyx dense sericeus tubo circ. 2 mm. longo, lobis lineari-lanceolatis ad 4 mm. longis. Corolla 1.1-1.2 cm. longa atrokermesina; vexillum circ. 4 mm. latum; alae 9-10 mm. longae; carina longe rostrata supra medium abrupte sursum curvata, pars inferior 7 mm., pars superior 4 mm. longa. Fructus maturus deest.

"China:—Mekong-Yangtze divide, Yunnan. Lat. 27° 30' N. Alt. 9000 ft. Shrub of 4-6 ft. Flowers black-crimson. Open situations amongst scrub. Oct. 1914." G. Forrest. No. 13,410.

Ligustrum rugosulum, W. W. Sm. Sp. nov.

Species affinis *L. yunnanensi*, L. Henry et *L. sinensi*, Lour. a quibus foliis rugosulis utrinque pilosulis inter alia valde divergit.

Frutex 2-5 m. altus erectus; ramuli juniores dense fulvo-hirtelli, vetustiores glabrescentes cinerei. Folia petiolo 5-10 mm. longo dense fulvo-hirtello suffulta; lamina vulgo 6-8 cm. longa, 2.5-3.5 cm. lata, ovato-lanceolata vel rarius subelliptica, basi subrotundata vel plus minusve cuneata, apice acuta vel obtusiuscula, in sicco firme papyracea, supra obscure viridis,

sparse pilosula, ad costam densius, nervis multo impressis rugosula, infra paululo pallidior, ad costam nervosque dense fulvo-hirtella, caeterum sparsim, nervis primariis distincte elevatis. Paniculae terminales ad 12 cm. longae et latae; axes omnes dense fulvo- vel rufido-hirtelli; pedicelli brevissimi vix 1 mm. superantes. Calyx circ. 1 mm. longus cupularis obsolete dentatus glaber. Corolla alba circ. 3 mm. longa; tubus brevis calyce paululo longior; lobi oblongi obtusiusculi tubum multo superantes. Filamenta lobis corollinis longiora antheris longiuscule exsertis. Fructus fere maturus globosus 3-4 mm. diametro.

China:—Mountains south of Mengtsz, Yunnan. At 5000 ft. Tree of 15 ft., with white flowers. Henry. No. 11,084B. In Herb. Edin.

In forests south-east of Szemao, Yunnan. At 4000 ft. Shrub of 7 ft. Henry. No. 12,803. In Herb. Edin.

A species readily recognised among the Chinese species by its foliage. Henry No. 11,084A in Herb. Edin. does not appear to be the same. The fruit is different, and the leaves do not match.

***Lonicera angustifolia*, Wall., var. *rhododactyla*, W. W. Sm.
Var. nov.**

Ramulis rubris primo minute puberulis mox glaberrimis nitentibus, foliis anguste obovatis vel oblanceolatis potius quam lanceolatis, apice rotundatis vel obtusis vix acutis haud acuminatis utrinque glaberrimis, bracteis, bracteolis, calycis dentibus, corolla (extus) glaberrimis a typo recedit; habitu, floris structura, ovariis connatis congruit.

"China:—Lichiang Range, Yunnan. Lat. 27° 30' N. Alt. 10,000-11,000 ft. Shrub of 3-5 ft. Flowers rose-pink. Open situations in scrub. June 1913." G. Forrest. No. 10,054.

***Lonicera chlamydata*, W. W. Sm. Nom. nov.**

L. chlamydophora, W. W. Sm. (nec Zabel) in Notes R.B.G. Edin., viii (1913), 109.

This species is more closely allied to *L. saccata*, Rehder than to *L. trichopoda*, Franch. as previously suggested. The flower of *L. chlamydata* is larger and fleshier than that of *L. saccata*, with a much broader tube, which is very densely hairy inside, while the style is setose rather than villous. The corolla is a deep golden yellow.

Two Yunnan sheets collected by F. Kingdon Ward appear to approach *L. saccata*, Rehder very closely. Ward No. 602, from boulder screes at 13,000 ft. in the Atuntsu district of N.W. Yunnan, almost matches the Szechwan plants—the

corolla is, however, about 13 mm. long. Ward No. 637, a shrub of 6-8 ft., in open places on screes at 14,000 ft., from the same area, is very similar, except for the glabrous style—perhaps that will prove to be at most only a varietal distinction. The affinity of these last is more with *L. saccata* than with *L. chlamydata*.

***Lonicera cyanocarpa*, Franch.**

The flowers of this species have not hitherto been described :—

Corolla viridi-flava 1.5-1.8 cm. longa, extus setulis sparsis praedita vel subglabra ; tubus basi gibbosus, circ. 1-1 cm. longus, ore circ. 8 mm. basi circ. 3 mm. latus, intus plus minusve dense setosulus ; lobi rotundati subaequales circ. 6 mm. diametro utrinque glabri. Stamina lobis paulo breviora filamentis glabris, antheris oblongis circ. 3 mm. longis. Stylus corollam paululo superans, parte superiore glaber, inferiore setosulus. Ovaria circ. 3 mm. longa glabra.

"China :—Lichiang Range, Yunnan. Lat. 27° 30' N. Alt. 12,000-13,000 ft. Dwarf shrub of 1-2 ft. Flowers green-yellow. On ledges of limestone cliffs and stony pasture. June 1913." G. Forrest. No. 10,276.

"S.E. Tibet :—Doker La, near Atuntsu ; alpine region at 14,000 ft. June 1913." F. Kingdon Ward. Nos. 542, 619.

"China :—Mountains of the Chungtien plateau, Yunnan. Lat. 27° 55' N. Alt. 12,000 ft. Shrub of 2-4 ft. Fruits deep bluish-purple. Open stony alpine pasture. Sept. 1913." G. Forrest. No. 11,356.

***Lonicera finitima*, W. W. Sm. Sp. nov.**

Species affinis *L. hispidae*, Pall. sed foliis multo minoribus, ovariis glabris inter alia differt ; quoad habitum *L. asperifoliam*, Hook. f. et Thoms. simulat, quae tamen foliis subtus pubescentibus, corolla minore inter alia recedit.

Fruticulus 30-60 cm. altus ramulis primo sparsim setosis atque minute puberulis subcoeruleis deinde cinerascensibus cortice fibroso praeditis. Gemmae pallide brunneae circ. 5 mm. longae oblongae glabrae perulis duabus exterioribus. Folia petiolo circ. 1 mm. longo setoso praedita ; lamina 7-20 mm. longa, 5-10 mm. lata, elliptica vel ovata, apice rotundata vel obtusa vel rarius acutiuscula apiculata, basi rotundata, coriacea, margine setoso-ciliata, supra setoso-scabrida, infra ad costam nervosque sparsim setosa, nervulis bene notatis. Pedunculi circ. 5 mm. longi, sparsim setosi atque minute puberuli. Bractae late ovatae, circ. 12 mm. longae, longiuscule setoso-ciliatae extus setoso-scabridae. Calycis dentes fere obsoleti breves. Corolla

circ. 2 cm. longa, in sicco flavida, extus sparsim setosula; tubus circ. 1.3 cm. longus, basi 2 mm. latus, supra ad 7 mm. ampliatus, intus setosulus; lobi 6-7 mm. longi, oblongo-ovati subaequales. Stamina corollam plus minusve aequantia, filamentis glabris antheris circ. 2.5 mm. longis. Stylus corollam aequans glaber; ovaria libera glabra annulo calycino vix dentato coronata. Fructus deest.

"S.E. Tibet:—Doker La, on the boundaries of Yunnan and Tibet, at an elevation of 13,000 ft. Dwarf shrub of 1-2 ft. on screes in the shrub belt. July 1913." F. Kingdon Ward. No. 701.

Lonicera Henryi, Hemsl., var. **setuligera**, W. W. Sm.
Var. nov.

Foliis minoribus, corollis extus setulis longiusculis conspersis aliquatenus a typo recedit.

China:—Near Tungchwan, Yunnan. Alt. 2600 m. Flowers white and yellow. Maire. No. 51 (anno 1913). In Herb. Edin.

This plant at first sight suggests something specifically different from *L. Henryi*, but it is united to that species by intermediates.

Lonicera inodora, W. W. Sm. Sp. nov.

Species affinis *L. ferrugineae*, Rehder; a qua inter alia ovario glabro differt; a *L. ferruginea*, Rehder, var. *bullata*, Rehder (quae ovario glabro gaudet) habitu glabriore, foliis vix bullatis haud ciliatis, inflorescentiis fulvido-pubescentibus, stylo piloso recedit.

Frutex semiscandens 2-4 m. altus ramulis dense fulvo-tomentosis. Folia petiolo 8-10 mm. longo tomentoso suffulta; lamina 7-9 cm. longa, 3-5 cm. lata, ovato-lanceolata, apice acuta apiculata, basi rotundata paululo cordatula, in sicco papyracea, supra atroviridis ad costam setosula, ceterum glabra vel subglabra, infra ad costam nervosque longiuscule fulvido-setosula; nervi nervulique supra impressi infra eminentes. Inflorescentiae axillares et terminales 2-16-florae. Pedunculi 1.5-2 cm. longi dense tomentosi; bracteae lineari-lanceolatae vel subulatae 2-10 mm. longae tomentosae; bracteolae ovatae pilosulae quartam ovarii partem aequantes. Calycis dentes vix 1 mm. longi triangulares ciliolati. Corolla ad 3.2 cm. longa flava extus appresse pilosula bilabiata; tubus circ. 2 cm. longus basi 2 mm. latus supra vix ampliatus intus pilosulus; labii superioris lobi circ. 3 mm. longi. Stamina corollam aequantia filamentis infra pilosulis. Stylus corollam aequans

ad medium vel ultro pilosus. Ovarium circ. 3 mm. longum glabrum.

"China:—Mingkwong Valley, Yunnan. Lat. 25° 20' N. Alt. 7000–8000 ft. Semiscandent shrub of 6–12 ft. Flowers yellow, non-fragrant. On scrub. Oct. 1912." G. Forrest. No. 9273.

In appearance this species resembles the Manipur variety of *Lonicera ferruginea*, Rehder. With its pilose style and comparatively small flowers it should perhaps be placed in Rehder's subsection *Breviflorae*.

***Lonicera oresbia*, W. W. Sm. Sp. nov.**

Species sectionis *Purpurascantium*, Rehder; a *L. obovata*, Royle bracteis minimis, bracteolis deficientibus recedit; a *L. serpyllifolia*, Rehder foliis glaberrimis, bracteis minoribus, corollis saccatis differt; a *L. aemulante*, Rehder foliis haud ciliatis, bracteis minoribus, stylo pilosulo divergit; *L. Farreri*, W. W. Sm. species aequae glaberrima bracteis longioribus, bracteolis minutis, corolla gracillima dignoscitur.

Fruticulus gracilis ramulis primo rubentibus glabris deinde cinerascens cortice fibroso. Folia decidua floribus fere coetanea petiolo 1.5–2 mm. longo glabro suffulta; lamina 7–15 mm. longa, 6–7 mm. lata, obovata, apice rotundata, basi cuneata, membranacea, utrinque glabra, supra viridis infra subglauca. Flores pedunculis 3–4 mm. longis glabris praediti; bracteae lanceolatae circ. 1 mm. longae glabrae ad medium ovarium attingentes; bracteolae nullae; ovaria ex toto connata, circ. 2 mm. longa, glabra, annulo calycino undulato circ. 1 mm. alto coronata. Corolla tubulosa 9–12 mm. longa extus glabra intus basi sparsim albo-villosa; tubus basi circ. 1.5 mm. latus gibbosus; lobi circ. 1 mm. longi subaequales. Stamina corollam paulo superantia supra medium tubum inserta filamentis glabris. Stylus staminibus paululo longior in parte inferiore albo-villosus.

China:—In the shrub and forest belt at 13,000–14,000 ft. Near Atuntsu, N.W. Yunnan. 1913. F. Kingdon Ward. No. 526.

***Lonicera Standishii*, Carr., var. *Monbeigii*, W. W. Sm. Var. nov.**

A typo bracteis magnis ovaria longe superantibus corollam saepe subaequantibus, calycis ore truncato longiuscule setosulo-ciliato divergit.

China:—N.W. Yunnan. 1907. Père Monbeig. No. 135 in Herb. Edin.

The leaves of the specimens are immature ; the bracts are very large and conspicuous. The plant may prove to be a distinct species.

Lonicera vestita, W. W. Sm. Sp. nov.

Species affinis *L. acuminatae*, Wall. et *L. Giralddii*, Rehder ; foliis parvis subtus dense incano-tomentosis, corollis circ. 1 cm. longis bene notata.

Frutex ad 3 m. altus ramulis primo densissime incano-tomentosis deinde glabrescentibus cinerascentibus. Folia (juniora floribus coactanea tantum visa) petiolo circ. 2 mm. longo tomentoso suffulta ; lamina 15-22 mm. longa, 8-12 mm. lata, plerumque late lanceolata, apice acuta apiculata, basi cuneata vel rotundata, chartacea, supra dense et appresse pilosula infra dense incano-tomentosa. Pedunculi 5-8 mm. longi albido-pilosi ; bracteae subulatae 2-3 mm. longae pilosae ; bracteolae truncatae ad duas partes ovarii pertinentes longiuscule ciliatae ; flores bini axillares. Calycis dentes circ. 0.5 mm. longi deltoidei ciliati. Corolla bilabiata 1-1.1 cm. longa partim alba partim flava extus dense pilosula ; tubus 4-5 mm. longus, circ. 2.5 mm. latus, basi gibbosus, intus pilosulus ; lobi labii superioris oblongi 2 mm. paulo excedentes. Stamina corollam aequantia filamentis circ. 5 mm. longis ad medium vel ultro pilosulis antheris 2.5 mm. longis. Stylus circ. 1 cm. longus ex toto pilosulus. Ovarium circ. 2 mm. longum sparsim pilosulum vel subglabrum.

"China :—Tungchwan, Yunnan ; alt. 2550 m. ; grand arbuste buissonnant ; haut 3 m. ; fleurs mi-jaunes mi-blanches." Maire No. 779 (anno 1914) in Herb. Edin. Also Maire No. 518 (anno 1913) in Herb. Edin.

This small-flowered shrub belongs to the subsection *Breviflorae*, Rehder in the vicinity of *L. Giralddii*, Rehder.

Lonicera virgultorum, W. W. Sm. Sp. nov.

Species affinis *L. ligustrinae*, Wall. a qua foliis chartaceis conspicuo setoso-ciliatis supra haud lucidis, corollae tubo latiore limbum aequante inter alia recedit ; a *L. pilcata*, Oliver corolla ad medium fissa facile dignoscenda.

Frutex 0.6-2.4 m. altus ramulis primo dense nigrido-pubescentibus deinde glabrescentibus cinerascentibus. Folia petiolo circ. 1 mm. longo pilosulo praedita ; lamina 2-3.5 cm. longa, 1-1.5 cm. lata, lanceolata vel ovato-lanceolata, superne attenuata apice ipso obtusiuscula, basi plus minusve late cuneata, in sicco chartacea, margine longiuscule setoso-ciliata, supra opaca punctulis nigris conspersa ad costam setosula, infra

pallidior glabra, costa media setosula excepta. Pedicelli 2-3 mm. longi minute pubescentes; bracteae lineares circ. 2 mm. longae minute ciliatae; bracteolae glabrae in cupulam ovaria celantem connatae. Calycis dentes triangulares vix 1 mm. longi acuti ciliolati; pileus ovaria coronans. Corolla viridiflava 8-9 mm. longa extus sparsim puberula circ. ad medium fissa; tubus basi circ. 2 mm. latus, ore circ. 4 mm. latus, basi gibbosus; lobi oblongi apice obtusi. Stamina corollam aequantia vel paulo superantia filamentis glabris antheris circ. 2.5 mm. longis. Stylus paulo exsertus, ad duas partes inferiores pilosus. Fructus maturus ruber seminibus circ. 6 complanatis 3 mm. longis 2 mm. latis.

"China:—Pu-Yungchang divide, Yunnan. Lat. 25° 10' N. Alt. 7000 ft. Shrub of 4-6 ft. Flowers greenish-yellow. Open situations amongst scrub. May 1913." G. Forrest. No. 9880.

"Hills to the east of Tengyueh, Yunnan. Lat. 25° N. Alt. 6000 ft. Shrub of 2-4 ft. Amongst scrub. May 1912." G. Forrest. No. 7779.

"Flanks of the Mingkwong Valley, Yunnan. Lat. 25° N. Alt. 7000 ft. Shrub of 6-8 ft. In fruit, fruit scarlet. Open situations amongst scrub. May 1913." G. Forrest. No. 7905.

In appearance this species resembles *L. pileata*, Oliver, var. *yunnanensis*, Franch.; it is more closely allied to *L. ligustrina*, Wall. in the flower structure.

Lonicera Wardii, W. W. Sm.

Species affinis *L. nervosae*, Maxim. et *L. lanceolatae*, Wall.; ab ambabus gibbo corollino dense et longiuscule setosulo inter alia differt.

Frutex ramulis hornotinis albido-pilosis atque puberulis, vetustioribus glabrescentibus cortice fibroso cinerascentibus. Gemmae oblongae pallide brunneae perulis acuminatis plus minusve persistentibus. Folia petiolo 3-4 mm. longo suffulta; lamina 4-6 cm. longa, 2.5-3 cm. lata, ovato-lanceolata vel ovata, apice acuta vel subacuta breviter apiculata, basi rotundata, margine undulata, in sicco membranacea, supra laete viridis subglabra nisi ad costam sulcatam dense pilosam, nervis nervulisque bene reticulatis conspicuis albidis, infra pallidior sparsim pilosa, ad costam dense pilosa. Pedunculi in axillis superioribus orientes 1-1.2 cm. longi pilosi; bracteae subulatae, ciliatae, vix 1 mm. superantes; bracteolae rotundatae in cupulam fere ad basim 4-partitam connatae vel subliberae ovarii dimidium aequantes ciliatae. Calycis dentes lineari-lanceolati circ. 1 mm. longi ciliati purpurascens. Corolla 1.3-1.4 cm. longa, bilabiata, in sicco purpurea, extus sparsim

pilosula, gibbo dense et longiuscule setosulo, limbo 9 mm. longo quam tubus duplo longiore, labio superiore breviter 4-lobato lobis ovatis, tubo intus basi pilosulo. Stamina limbum fere aequantia filamentis glabris antheris oblongis circ. 3 mm. longis. Stylus staminibus paulo brevior pilosulus. Ovaria glabra circ. 2 mm. longa. Fructus deest.

"China:—At Atuntsu on the borders of Yunnan and Tibet, in rain-forest undergrowth, 10,000–12,000 ft. June 1913." F. Kingdon Ward. No. 558.

***Lychnis bhutanica*, W. W. Sm. Sp. nov.**

Species ex affinitate *L. indicæ*, Benth. et *L. nutantis*, Benth. sed caule glanduloso-piloso, foliis carnosulis dense glanduloso-pilosis, inflorescentiis glandulosis inter alia longe differt.

Planta circ. 30 cm. alta. Caulis ramosus infra pilis purpureis dense indutus, supra minus dense. Folia radicalia obovata vel late spatulata, \pm 12 cm. longa, \pm 4 cm. lata, apice subacuta, basi in petiolum latum cuneata, carnosula, undique \pm glanduloso-pilosa; folia caulina ovata \pm 7 cm. longa, \pm 3.5 cm. lata, sessilia, acuta, basi ipsa dense purpureo-pilosa, caeterum radicalibus subsimilia. Panicula laxa 10–20-flora; pedunculi ad 3 cm. longi densissime glanduloso-pilosi; pedicelli breves bracteis parvis praediti. Calyx circ. 1.8 cm. longus, multo inflatus, pallido-viridis jugis 10 longitudinalibus dense nigro-pilosis pererratus intus glaber; dentes 5 triangulares circ. 5 mm. longi dense ciliati, dorso pilis nigris glandulosis hirsuti. Carpophorum 5 mm. longum dense albo-villosum. Petala circ. 1.7 cm. longa infra carpophoro adhaerentia ejusque ope paulo calycem superantia; unguis oblanceolata apice late alata viridi-albida purpureo-striata; lamina purpurea 3–4-fida, segmentis duobus plerumque aliis majoribus. Stamina 10 filamentis basi ipsa albo-villosis 1.3 cm. longis, antheris 2 mm. longis. Styli 5 ovarium 7–8 mm. longum subaequantes. Fructus circ. 1.5 cm. longus laevis nitenti-olivaceus dentibus 5 integris vel bifidis; semina circ. 1 mm. longa, reniformia, tuberculata, brunnea.

"Bhutan:—Parshong, Timpu. Alt. 12,000 ft. In peat meadow. September 1914." R. E. Cooper. No. 2952. (Fruiting specimen.)

Flowering specimen in Herb. Edin. cult. Bees, Ltd., from seeds of No. 2952.

"Parshong, Timpu. Alt. 12,000 ft. July 1914." R. E. Cooper. No. 1878. (Flowering specimen.)

Meliosma Forrestii, W. W. Sm. Sp. nov.

Species affinis *M. dilleniacifoliae*, Blume a qua foliis coriaceis inter alia signa abunde differt.

Frutex vel arbor 6-12 m. alta ramulis dense fulvo-tomentellis; gemmae tomentosae. Folia alterna petiolo 2-4 cm. longo dense fulvo-tomentello praedita; lamina 18-35 cm. longa, 7-16 cm. lata, plus minusve elliptica, subabrupte et breviter acuminata, basi cuneata, margine subspinuloso-serrata, coriacea, supra glabra nisi ad costam nervosque fulvo-tomentellos, infra ad costam dense tomentella, ad nervos nervulosque fulvo-pilosula, nervis primariis utrinsecus 16-20 parallelis supra impressis infra eminentibus ad serraturas excurrentibus. Paniculae (submaturae) terminales, pyramidales, 25 cm. longae vel ultro tomento denso fulvo obiectae. Florum alabastra sessilia basi dense fulvo-pilosula. Sepala 5, suborbicularia, 1 mm. paulo excedentia margine ciliata. Petala suborbicularia glabra. Fructus deest.

"China:—Ma-chang-kai Valley, Yunnan. Lat. 25° 20' N. Alt. 7000 ft. Shrub or tree of 20-40 ft. Flowers (immature) creamy yellow. In open forests. July 1913." G. Forrest. No. 11,744.

Myricaria rosea, W. W. Sm. Sp. nov.

Species habitu laxo, foliis longiusculis vix imbricatis, bracteis praelongis flores apertos superantibus inter alia cognoscenda; ex affinitate *M. prostratae*, Hook. f. et Thoms.

Suffrutex decumbens circ. 1 m. altus, ramis striatis ramulisque primo glauco-viridibus. Folia 5-15 mm. longa, 1-2 mm. lata, lineari-lanceolata, saepe falcata, sessilia, laxiuscule approximata. Inflorescentiae 4-8 cm. longae spiciformes ramulo florifero bracteis foliaceis lineari-lanceolatis 1.5-2 cm. longis crebre ornato; bractee superiores sterilibus subsimiles paulo minores flores longiuscule superantes. Pedicelli 2-3 mm. longi. Sepala libera lineari-lanceolata 5-6 mm. longa. Petala anguste obovata 5-7 mm. longa rosea. Stamina 10 ad medium connata. Fructus deest.

"China:—Mountains in the N.E. of the Yangtze bend, Yunnan. Lat. 27° 45' N. Alt. 10,000 ft. Shrub of 2-4 ft. Flowers rose. Open situations amongst scrub. June 1913." G. Forrest. No. 10,609.

"Near Atuntsu, Yunnan, 11,000-13,000 ft. on screes; low-growing, spreading shrub 1-2 ft. high on granite rocks by streams. June 1913." F. Kingdon Ward. No. 562.

Neillia villosa, W. W. Sm. Sp. nov.

Species affinis *N. sinensi*, Oliver; foliis ad 12 cm. longis subtus dense hirsuto-villosis inter alia bene notata.

Frutex; rami hornotini teretes flexuosi dense fulvo-vel subferrugineo-tomentosi. Folia petiolo circ. 5 mm. longo dense tomentoso suffulta; lamina plerumque 8-12 cm. longa, 4-6.5 cm. lata, ambitu ovata, saepe ad tertiam vel quartam partem lobata, lobis utrinque vulgo 3-4, apice in caudam longam lamina vix brevior ex toto serratam attenuata, basi plus minusve rotundata, margine serrata, in sicco papyracea, supra nunc densiuscule et longiuscule pilosa, nunc sparsius, pilis ex tuberculis minimis ortis, infra dense fulvo-vel subferrugineo-hirsuto-villosa; nervi utrinque 5-6 paria; stipulae 7-9 mm. longae, ovatae vel cordiformes, subintegrae sparsim pilosae. Racemi circ. 3.5 cm. longi, pedunculo circ. 1 cm. longo tomentoso suffulti, terminales, simplices, 8-12-flori; bractae ad 1 cm. longae lineari-lanceolatae vel sublineares, dense pilosae; pedicelli 2-3 mm. longi, ut rhachis longiuscule pilosi. Calycis tubus anguste cylindricus circ. 8 mm. longus extus sparsim pilosulus intus dense villosulus, lobi circ. 5 mm. longi lanceolati subito longe acuminati utrinque villosuli; petala nulla, saltem nulla visa; stamina circ. 15; ovarium circ. 3 mm. longum villosulum in stylum 7-8 mm. longum supra glabrum infra villosulum abiens. Fructus deest.

China:—Neighbourhood of Yunnanfu, Yunnan. Maire. No. 2330 in Herb. Edin. coll. circ. anno 1906.

Nothopanax membranifolius, W. W. Sm. Sp. nov.

Species inter affines chinenses foliis simplicibus haud lobatis minute denticulatis in sicco tenuiter membranaceis bene notata.

Frutex 2-6 m. altus ramis gracilibus glabris vel mox glabrescentibus brunneis. Folia simplicia petiolo 5-10 cm. longo gracili glabro nisi ad insertionem pilosulam suffulta; lamina 8-17 cm. longa, 3-6.5 cm. lata, anguste elliptica vel lanceolato-elliptica, apice ad 3 cm. subabrupte caudato-acuminata, basi plus minusve rotundata, margine denticulis induratis regulariter praedita, in sicco membranacea, utrinque glabra, supra opacoviridis, subtus pallidior subolivacea, reticulo nervulorum utrinque bene conspicuo. Paniculae ad 8 cm. longae foliis plerumque breviores ramis brevibus glabris vel minute sparsimque stellatopuberulis; pedicelli 6-8 mm. longi. Calycis dentes brevissimi acutiusculi; petala 1.5-2 mm. longa, triangularia; stamina 5; ovarium obconicum circ. 2 mm. longum, sparsim stellatopuberulum biloculare; styli 2, liberi vel basi paululo connati.

“China:—Hills to the south of Tengyueh, Yunnan. Lat.

25° N. Alt. 6000-7000 ft. Shrub of 6-9 ft. Flowers green. Amongst scrub and in thickets. June 1912." G. Forrest. No. 8086.

"Outskirts of lava-bed to west of Tengyueh. Lat. 25° N. Alt. 5000 ft. Tree or shrub of 10-20 ft. Flowers green. May 1912." G. Forrest. No. 7704.

Osbeckia Mairei, Craib. Sp. nov.

Species nova ab affini *O. septemnervia*, Ham. Mss. floribus minoribus distinguenda.

Ramuli patenter densius hirsuti. Folia opposita vel ternata, oblonga vel oblongo-lanceolata, apice longius acute attenuata, basi late cuneata vel rotundato-cuneata, 8.5-11.5 cm. longa, 2-3.3 cm. lata, chartacea, pagina superiore setis satis longis plus minusve adpressis sparsis hirsuta, inferiore pallidiora, densius, praesertim ad nervos, hirsuta, 7-nervia, nervis usque ad basem vel fere ad basem inter se omnino liberis pagina superiore parum immersis inferiore prominentibus, nervis transversis numerosis inter se parallelis fere semper integris haud ramosis supra subobscuris subtus prominulis, margine ciliata, obscurius minute denticulata, petiolo circa 3 mm. longo suffulta. Paniculae terminales et axillares et ramulos breves laterales terminantes, densius hirsutae, pedunculo communi usque ad 4 cm. longo suffultae; pedunculi ultimi circa 1 cm. longi; pedicelli subnulli; bractee cito deciduae, dorso pauci-setosae, setoso-ciliatae. Receptaculum 8 mm. altum, extra sublatius hirsutum, appendiculis apice setosis haud glanduloso-capitatis. Calycis tubus 1 mm. longus, segmenta lanceolata vel lineari-lanceolata, apice longe attenuato-acuminata, acuta, 10 mm. longa, 2 mm. lata, extra medio sparse setosa, intra glabra, setoso-ciliata, appendiculis setiferis haud glanduloso-capitatis alternantia. Petala rubra (ex Maire), obovata vel subelliptica, apice rotundata, basi in unguem brevem latum plus minusve distinctum angustata vel attenuata, 2 cm. longa, 1.3 cm. lata, ciliata. Antherae filamentis aequilongae, 13 mm. longae, basi haud setosae. Ovarium 7 mm. altum (apice conico hirsuto incluso), stylo 2.5 cm. longo.

China:—Tchouan-se-pa, N.E. Yunnan, 690 m. E. E. Maire.

Osbeckia robusta, Craib. Sp. nov.

Species ab *O. yunnanense*, Franchet Mss. antheris basi paucisetosis recedit.

Caules 2-3 pedales (ex Forrest), fistulosi, dense patule pallide ferrugineo-hirsuti, satis robusti, basi circiter 6 mm. diametro. Folia oblongo-ovata vel ovata, apice saepe subacuminata, summo apice obtusa vel acuta, rotundata vel rotundato-cuneata,

rarius acuminata, usque ad 8 cm. longa et 4 cm. lata, chartacea, pagina utraque setis plus minusve adpressis hirsuta, superiore sparse, inferiore densius hirsuta, inferiore pallidiora, lutescentia, 7-nervia, nervis inter se ad imam basem liberis supra impressis subtus prominentibus, nervis transversis saepe ramosis satis numerosis subtus prominulis supra subconspicuis parum immersis, margine integra, conspicue ciliata, petiolo 4-5 mm. longo ut caule hirsuto suffulta. Inflorescentia et axillaris et terminalis, densa, capituliformis, pedunculo communi usque ad 2.5 cm. longo indumento ei caulium simili tecto suffulta; bractee ovatae, acuminatae, ad 1 cm. longae, extra adpresse hirsutae, intra glabrae, longius ciliatae; pedicelli subnulli. Receptaculum 1 cm. longum, extra densius hirsutum, appendiculis apice haud glanduloso-capitatis. Calycis tubus circa 0.5 mm. longus, segmenta 4, lineari-oblonga, acute longius acuminata, 7-8 mm. longa, 2-2.25 mm. lata, dorso margineque longe subsparse setosa, intra glabra. Petala 4, suborbicularia vel rhomboideo-orbicularia, 2.2 cm. longa, 2.1-2.3 cm. lata, ciliata. Antherae 12 mm. longae, basi paucisetosae, filamentis 15 mm. longis suffultae. Ovarium cum apice conico hirsuto 6 mm. longum, stylo 25 mm. longo inferne parce hirsuto.

China:—Yunnan, hills to the west of Tengyueh, on open scrubby hillsides, 6000-65000 ft.; plant of 2-3 ft.; flowers bright rose. G. Forrest. No. 8561.

Osbeckia septemnervia, Ham. Mss. in Herb. Edin. ex Craib.
Sp. nov.

Species nova ab *O. crinita*, Benth. floribus multo majoribus recedit.

Ramuli quadrangulares, pallide patule densius et longius hirsuti. Folia opposita, lanceolata vel oblongo-lanceolata, superne longe gradatim attenuata, summo apice acuta, basi cuneata rotundatave, 7.5-12.5 cm. longa, 2-3.2 cm. lata, chartacea, pagina superiore setis rigidis pallidis adpressis subsparsis hirsuta, inferiore pallidiora, ad nervos longius setosa, praeterea pilis brevibus albis adpressis sparse tecta, e basi 7-nervia, nervis supra impressis subtus prominentibus, nervis transversis supra obscuris vel subobscuris subtus prominulis, margine integra, petiolo 7-12 mm. longo densius setoso suffulta. Cymae et axillares, subsessiles vel pedunculo foliis dimidio breviorae suffultae et in paniculam terminalem ramis oppositis ad 6 cm. longis dispositae, pedunculis primariis et secundariis cum rhachi setis ut ramulis tectis; cymae utriusque flores congesti, sessiles vel subsessiles; bractee subrotundatae vel ovatae, apice saepissime acuminatae, 6-9 mm. longae, dorso adpresse setosae, intra glabrae, margine longe setoso-ciliatae. Recepta-

culum 12 mm. altum, extra appendiculis pallide longe setosis apice haud glanduloso-capitatis subdense hirsutum praetereaque pilis brevibus adpressis albis persistentibus sparse instructum. Calycis tubus fere 1.5 mm. longus, segmenta 4, lineari-lanceolata, apice longe attenuato-acuminata vel subacuminata, 14-15 mm. longa, 2.25-3 mm. lata, dorso sparse longe setosa et pilis albis brevibus adpressis instructa, margine setoso-ciliata, appendiculis setiferis usque ad 9 mm. longis haud glanduloso-capitatis alternantia. Petala 4, obovata vel fere orbiculari-obovata, plus minusve distincte breviter unguiculata, ungui incluso ad 2.7 cm. longa, circa 2 cm. lata, ciliata. Stamina ad 2.8 cm. longa, antheris quam filamenta paulo longioribus. Ovarium ambitu anguste oblongum, apice conico setoso incluso circa 6.5 mm. longum; stylus vix 3 cm. longus.

Himalaya:—Gualpara. Hamilton. No. 916.

***Osbeckia sikkimensis*, Craib. Sp. nov.**

Species nova ab affini *O. Wattii*, Craib foliorum nervis ad basem haud liberis, ramulis sparse hirsutis, petalis apice breviter acuminatis distinguenda.

Ramuli fistulosi, pilis albis rigidis basi tumidis divergentibus primo dense mox laxius hirsuti. Folia oblonga vel oblongo-lanceolata, apice longius attenuata vel attenuato-subacuminata, summo apice acuta, basi cuneata lateve cuneata, 7-16 cm. longa, 2.3-5.3 cm. lata, chartaceo-membranacea vel membranacea, pagina superiore conspicue sed sparsius longe plus minusve adpresse albo-setosa, inferiore pallidiora, tantum ad nervos nervosque transversos sparse setosa, 7-nervia, nervis duobus lateralibus costae proxime basi distincte connatis, omnibus supra impressis subtus prominentibus, nervis transversis sat numerosis supra obscuris vel haud rarius subconspicuis et parum immersis subtus prominulis, margine longius ciliata, petiolo 1-2 cm. longo dense setuloso-hirsuto suffulta. Flores sessiles; bracteae ovatae longius acuminatae, 6-7 mm. longae, 4 mm. latae, dorso margineque setis satis longis basi tumidis albis instructae; bracteolae lanceolatae, circa 5 mm. longae, indumento ut bracteae instructae. Receptaculum 11 mm. altum, extra appendiculis setosis saltem nonnullis apice glandula capitata stipitata instructis densius tectum. Calycis segmenta 7-8 mm. longa, 1-2 mm. lata, apice longius attenuata, dorso margineque setulis albis basi tumidis parce ornata, appendiculis inferne setosis superne nudis summo apice glanduloso-capitatis alternantia. Petala 4, obovata vel orbiculari-obovata, apice breviter acute acuminata, 12-15 mm. longa, 11 mm. lata, glabra vel apice pauperrime ciliata. Antherae 14 mm. longae, filamentis 11 mm. longis suffultae. Ovarium 6.5 mm. altum, apice conicum,

setosum, summo apice truncatum, stylo 17 mm. longo.—*O. crinita*, C. B. Clarke in Hook. f., Fl. Brit. Ind., ii, p. 517, pro parte; ? *Lacaita* in Journ. Linn. Soc., xliii, p. 468, non Benth.

Himalaya:—Sikkim, Ribu et Rhomoo (25.10.11); Darjeeling, Herb. R.E.P., No. 21,252; Yoksun, 5800 ft. C. B. Clarke. No. 25,207B.

***Osbeckia Wattii*, Craib. Sp. nov.**

Species ab *O. paludosa*, Craib, antheris basi haud setosis, foliis supra sparse setosis cognoscenda.

Ramuli primo setis longiusculis divergentibus dense tecti, demum plus minusve glabrescentes, robusti. Folia oblonga, apice acute acuminata, usque ad 14 cm. longa et 5.4 cm. lata, chartacea, pagina superiore setis longis conspicue sed sparsius instructa, inferiore ad nervos dense setosa et ad nervos transversos sparsius setosa, e basi 7-nervia nervis inter se ad imam basem liberis pagina superiore parum impressis inferiore prominentibus, nervis transversis inter se parallelis supra sub-obscuris parum immersis subtus prominulis, margine obscure serrulata, ciliata, petiolo sat robusto circiter 1 cm. longo indumento ut ramulis oblecto suffulta. Paniculae terminales, dense hirsutae, floribus sessilibus congestis; bracteae 3-4 mm. longae, 5 mm. latae, apice rotundatae vel brevius acuminatae, hirsuto-ciliatae, extra superne plurisetosae, intra glabrae. Receptaculum 8-9 mm. altum, extra appendiculis setosis omnibus vel saltem plerisque apice glandulosis haud setosis oblectum. Calycis tubus circa 0.75 mm. longus, segmenta 4, oblanceolata, apice longius attenuato-acuminata, 8 mm. longa, fere 2.5 mm. lata, dorso margineque setosa, intra glabra, appendiculis setosis apice glandulosis alternantia. Petala 4, obovata, apice rotundata, basi in unguem latum plerumque vix distinctum angustata, 17 mm. longa, 13-14 mm. lata, apice pauperius ciliolata. Antherae 12.5 mm. longae, filamentis aequilongae. Ovarium 5 mm. altum, apice setosum, stylo 2 cm. longo.

India:—Naga Hills, Kohima. 5000 ft. G. Watt. No. 7280.

***Osbeckia yunnanensis*, Franchet Mss. ex Craib. Sp. nov.**

Species ab *O. crinita*, Benth. cui affinis, partibus omnibus multo majoribus recedit.

Caules stricti, erecti, 30-56 cm. alti, simplices vel rarius parce ramosi, obscure quadrangulares, mox fere teretes, fistulosi, lutescentes, subsparse patenter hirsuti. Folia ovata vel anguste ovata, apice acuta vel obtusa, vix acuminata, basi rotundata vel cuneato-rotundata, 3.5-5.5 cm. longa, 1.5-3 cm. lata,

chartacea vel chartaceo-coriacea, pagina superiore longe sparse sed conspicue setosa, inferiore ad costam nervos nervulosque sparse setosa, subtus lutescentia, 7-nervia, nervis usque ad basem inter se liberis supra parum immersis subtus prominentibus, nervis transversis plus minusve laxe reticulatis subtus prominulis, petiolo usque ad 3 mm. longo sed plerumque brevior et haud rarius subnullo suffulta. Flores in paniculas terminales angustas dispositi et etiam axillares et rarius ramulos breves laterales terminantes; pedunculi communes 1-2 cm. longi, indumento ut caules tecti; pedicelli perbreves; bractae deciduae dorso sparse setosae, ciliatae. Receptaculum 14 mm. longum, extra appendiculis longe setosis sed haud glanduloso-capitatis laxius instructum. Calycis tubus 1 mm. longus, segmenta 7-9 mm. longa, inferne 1.5 mm. lata, dorso margineque longe sparse setosa, appendiculis setiferis ad 4 mm. longis alternantia. Petala 4, obovata vel orbiculari-obovata, apice rotundata vel subtruncata, brevissime acuminata vel sinuata, 22 mm. longa, 18-20 mm. lata, ciliata. Stamina 8; antherae 18 mm. longae, basi haud setosae, filamentis 14 mm. longis suffultae. Ovarium cum apice conico setoso 9 mm. longum, stylo 23-24 mm. longo glabro vel setulis perpaucis inferne instructo.—*O. crinita*, Benth., var. *yunnanensis*, Cogn. in DC. Mon. Phan., vii, p. 324.

China:—Yunnan, dry stony pasture, eastern flank of Tali Range, 6500-8000 ft. Flowers bright magenta-rose. G. Forrest. No. 7140; Ibid. Flowers bright purplish-rose. G. Forrest. No. 4395.

Yunnan, loco haud indicato, Delavay.

Pentapanax Forrestii, W. W. Sm. Sp. nov.

Species ex affinitate *P. verticillati*, Dunn a quo ex descriptione foliolis multo majoribus membranaceis subtus haud glaucis inter alia differt.

Frutex 6 m. altus ramulis inermibus glabris. Folia petiolo ad 20 cm. longo ad vaginam pilosulo ceterum glabro suffulta, 3-foliolata; petioluli laterales brevissimi 1-2 mm. longi, terminalis longissimus ad 8 cm., ad insertionem inferiorem rufo-tomentello-pulvinati; lamina ad 15 cm. longa, ad 7 cm. lata, oblonga vel ovato-oblonga, apice abrupte atque breviter acuminata, basi rotundata, margine integra, siccando membranacea, supra viridis glabra infra paulo pallidior glabra nisi ad insertionem petioluli saepe rufo-tomentella; nervi nervulique utrinque conspicui bene reticulati. Inflorescentiae quoad formam et magnitudinem eis *P. Leschenaultii* similes; paniculae circ. 12, umbellulis 3-4 plerumque praeditae; pedunculi circ. 5 cm. longi, secundarii circ. 2 cm., subdense rufo-pilosuli; pedicelli 5-8 mm. longi articulati glabri. Calycis margo brevissimus

glaber lobulis obtusis. Petala circ. 1.5 mm. longa triangularia leviter imbricata glabra. Stamina 5; discus late conicus; styli ad apicem connati; ovarium 5-loculare. Fructus maturus deest.

"China:—Kari pass, Mekong-Yangtze divide, Yunnan. Lat. 27° 40' N. Alt. 10,000 ft. Shrub of 20 ft. Flowers olive-yellow. In open thickets. July 1914." G. Forrest. No. 12,941.

Photinia flavidiflora, W. W. Sm. Sp. nov.

Species certe valde affinis *P. integrifoliae*, Lindl. et *P. Notonianae*, Wight et Arn. a quibus floribus duplo majoribus recognoscitur.

Frutex 2-6 m. altus; ramuli hornotini crassi glabri, annotini atro-brunnei, seniores tandem cinerei decorticantes. Folia persistentia, valde coriacea, petiolo 2-4 cm. longo valido corrugato glabro suffulta; lamina 13-23 cm. longa, 6-9 cm. lata, oblanceolata vel elliptica, apice breviter acuminata vel interdum rotundata, basi rotundata vel late cuneata, integerrima, supra pallido-viridis, opaca, glabra, subtus paululo pallidior glabra; costa media supra impressa, infra multo eminens, nervis numerosis ad marginem vix pertinentibus cum nervulis reticulum conspicuum utrinque in sicco exhibentibus. Corymbus terminalis ad 12 cm. longus, ad 12 cm. latus, multiflorus, ramosus; rhachis ramulique validi primum pilis albidis subdense hispiduli mox glabrescentes; pedicelli 2-4 mm. longi, sparsim pilosuli; bracteae minutae caducae. Flores 8-10 mm. diametro lacteo-flavidi; calycis tubus late cupularis circ. 2.5 mm. longus glaber vel sparsim furfuraceus, lobi brevissimi ovati obtusi glabri. Petala 3-3.5 mm. longa, obovata vel suborbicularia, apice rotundata, glabra. Stamina 20 filamentis 4 mm. longis corollam superantibus. Ovarium biloculare apice dense albido-villosulum; styli 2 subliberi vel ad medium connati staminibus duplo breviores stigmate complanato capitato. Fructus vix maturus subglobosus circ. 4 mm. diametro, glaber nisi ad apicem, calycis dentibus persistentibus erectiusculis.

"China:—Mingkwong Valley, Yunnan. Lat. 25° 20' N. Alt. 7000 ft. Shrub of 15-20 ft. Flowers creamy-yellow. Open situations in thickets. Nov. 1912." G. Forrest. No. 9221.

"Hills to the N.W. of Tengyueh, Yunnan. Lat. 25° 10' N. Alt. 8000 ft. Shrub of 12-20 ft. Flowers creamy-yellow, anthers violet. Open situations in thickets. Nov. 1912." G. Forrest. No. 9294.

"Divide between the Tengyueh and Shweli Valleys. Lat. 25° N. Alt. 7000 ft. Shrub of 6-15 ft. In fruit. In thickets. May 1912." G. Forrest. No. 7901.

"Hills to the N.W. of Tengyueh. Lat. 25° 10' N. Alt. 7000 ft. Shrub of 12-20 ft. In fruit. Amongst scrub. June 1912." G. Forrest. No. 8079.

I have compared this species with numerous Himalayan and Neilgherry specimens of *P. integrifolia*, Lindl. and *P. Notoniana*, Wight and Arn.; it differs chiefly in the much larger flowers; the stamens are four times as long.

Photinia loriformis, W. W. Sm. Sp. nov.

Species affinis *P. argutae*, Lindl. et *P. salicifoliae*, Dcne. sed foliis lineari-oblongis vel loriformibus remotiuscule subspinose serratis inter alia abunde discrepat.

Frutex vel arbor parva; altitudo non nota; ramuli hornotini tomento denso adpresso fulvido induti, annotini glabrescentes, deinde cinerei vel cinereo-brunnei. Folia persistentia coriacea petiolo 3-12 mm. longo primum dense fulvido-tomentello tandem glabro suffulta; lamina variabilis, nunc lineari-oblonga vel anguste lanceolata, 6-9 cm. longa, 1-2 cm. lata, nunc loriformis, ad 10 cm. longa, circ. 5 mm. lata, apice nunc rotundata mucronata, nunc acutata spinoso-mucronata, basi late cuneata, margine in sicco paululo revoluta remotiuscule et argute serrata vel spinoso-serrata, supra lucida glabra, infra tomento denso cinereo vel fulvido persistente (tantum in senectute delabente) induta; costa media nervique 10-20 paria supra impressi infra prominuli. Corymbi terminales multiflori 2-4 cm. lati densiflori; ramuli cum pedicellis 1-3 mm. longis dense vel laxiuscule fulvido-tomentelli; fructiferi glabrescentes; bracteae bracteolaeque lineares caducae. Calycis tubus turbinatus fere 2 mm. longus dense albido-tomentellus, lobi circ. 1 mm. longi, ovati, apice rotundati, margine saepe nigro-glandulosi, extra tomentelli, intus glabri. Petala circ. 3 mm. diametro orbicularia brevissime unguiculata glabra. Stamina 20 petalis multo breviora. Ovarium biloculare apice dense albo-villosum; styli 2 liberi basi villosi circ. 1.5 mm. longi; stigma subcapitatum. Fructus ovoideus circ. 5 mm. longus, 3.5 mm. latus, ruber, sparsim pilosulus calycis dentibus incurvis coronatus; semina 2-4, rubro-brunnea, 2-3 mm. longa.

"China:—Vicinity of Yunnanfu, Yunnan." Maire in Herb. Edin. Nos. 1118, 1117, 1755, 2099.

The narrow-leaved forms of this species are very remarkable.

Photinia sambuciflora, W. W. Sm. Sp. nov.

Species affinis *P. integrifoliae*, Lindl. a qua foliis deciduis in sicco tenuiter papyraceis vel submembranaceis inter alia differt.

Frutex 6-10.5 m. altus; ramuli hornotini crassi angulati glabri, annotini brunnei. Folia decidua tenuiter papyracea vel submembranacea petiolo 1-4 cm. longo glabro suffulta; lamina 8-18 cm. longa, 4-7 cm. lata, anguste elliptica vel oblanceolata, apice plerumque breviter acuminata, basi late cuneata vel subrotundata, integerrima, supra laete viridis lucida, infra subolivacea opaca, utrinque glabra; costa media supra impressa, subtus valde eminens, nervis utrinque 10-20 paribus ad marginem vix pertinentibus cum nervulis reticulum supra obscurum infra in sicco manifestum exhibentibus. Corymbus terminalis ad 15 cm. altus, ad 24 cm. latus, multiflorus; rhachis ramulique multoties divisi glabri; pedicelli ad 4 mm. longi glabri; bracteae lineari-oblongae 2-3 mm. longae; bracteolae minutae rubidae. Flores vix 5 mm. diametro lacteo-flavidi; calycis tubus turbinatus circ. 1 mm. longus glaber, lobi brevissimi ovati. Petala 2-2.5 mm. longa, late elliptica vel orbicularia, glabra. Stamina 20 petalis paulo breviora. Ovarium biloculare apice dense albido-villosulum; styli duo subliberi staminibus breviores stigmatibus capitato. Fructus deest.

"China:—Hills to the north of Tengyueh, Yunnan. Lat. 25° 20' N. Alt. 6000-7000 ft. Shrub of 20-35 ft. Flowers creamy-yellow, fragrant. Open thickets. March 1913." G. Forrest. No. 9722.

"Shweli-Salween divide, Yunnan. Lat. 25° 10' N. Alt. 8000-9000 ft. Shrub of 20-30 ft. Flowers pale creamy-yellow. In open thickets. April 1914." G. Forrest. No. 12,293.

Pyrus (Sorbus) Harrowianus, Balf. f. et W. W. Sm. Sp. nov.

Inter species chinenses affinis *Sorbo Sargentianae*, Koehne quae foliolis acuminatis multo minoribus plus minusve lanatis inter alia differt; a *Pyro insigni*, Hook. f. specie himalayensi haud remota; foliolis 20 cm. saepe excedentibus primo intuitu recognoscenda.

Arbor 8-13 m. alta; rami crassi (in scheda 5-7 mm. diametro) atropurpurei nitidi glabri vel glabrescentes lenticellis elongatis albidis bene notati; rami juniores in spec. cultis prima aetate rufido-villosi deinde plus minusve cinerascens; gemmae magnae 1.5-2 cm. longae acutae glabrae vel sparsim rufido-villosulae; stipulae herbaceae magnae plerumque 1-2 cm. longae apice in auriculas acutas productae persistentes. Folia variabilia in spec. juvenilibus cultis plerumque trifoliolata deinde 3-9-foliolata; folia in typo cum petiolo 2-3 cm. longo ad 24 cm. longa, plerumque 2-3-juga; rhachis exalata plerumque glabra purpurascens interstitiis circ. 2 cm. longis; foliola coriacea aequalia vel subaequalia anguste oblonga,

majora 17-21 cm. longa, 4-5 cm. lata, basi asymmetrica, rotundata vel late cuneata, apice rotundata, margine serrulata dentibus utrinque circ. 40-50, paululo revoluta (ideoque serraturae saepe obscurae), supra glabra plus minusve nitida, infra glabra plus minusve glauca, costa impressa subtus multo elevata, nervis utrinque circ. 30, reticulo supra paulo obscuro infra conspicuo; foliola in spec. juvenilibus plana marginibus haud revolutis serraturis conspicuis. Inflorescentia circ. 12 cm. longa, circ. 15 cm. lata, convexa, plus minusve densa, sub fructu sparsim longiuscule albo-villosa. Flores non visi. Sepala circ. 1.5 mm. longa triangularia rubrida. Carpodia plerumque tria. Fructus vix maturus ovoideo-globosus apice truncatulus circ. 5 mm. longus circ. 4 mm. latus.

"China:—Tree of 25-40 ft. In fruit. In thickets on the western flank of the Shweli-Salween divide, Yunnan. Lat. 25° 20' N. Alt. 9000 ft. Aug. 1912." G. Forrest. No. 9040.

This is a very remarkable species. At maturity it is conspicuous by the large size of the leaflets which often exceed 8 inches in length, by the small number of the pairs of leaflets and by their stout coriaceous texture. In the young plants observed in cultivation in the Royal Botanic Garden the leaves are generally trifoliate, with a shining upper surface and distinct serration; in plants of a foot high trifoliate leaves are found along with leaves showing 2-4 pairs of leaflets. Among the Chinese species of *Pyrus* of the section *Sorbus* the species most akin appears to be *S. Sargentiana*, Koehne; the leaflets, however, in that species are decidedly small, have a long acuminate apex, a much thinner texture, and a more or less deciduous covering of wool especially on the under surface. Another close ally is *P. insignis*, Hook. f. from the East Himalaya, which has smaller more numerous leaflets and is much less glabrous. The specific name is in honour of Mr. Robert Lewis Harrow, Head Gardener of the Royal Botanic Garden since 1902.

Rhamnella Forrestii, W. W. Sm. Sp. nov.

Species valde affinis *Rhamnellae Martinii*, Schneider a qua foliis tenuioribus, nervis paucioribus magis distantibus angulo majore a costa ad marginem decurrentibus inter alia signa divergit; a *R. Mairei*, Schneider inflorescentiis 1-2-floris differt; a *R. Julianae*, Schneider foliis glaberrimis recognoscitur.

Frutex 2-3 m. altus; ramuli graciles glabri cinerei. Folia petiolo circ. 5 mm. longo suffulta; stipulae eas *Rhamnellae Martinii* simulant; lamina in sicco tenuiter membranacea, 4-7.5 cm. longa, 2-3 cm. lata, oblongo-lanceolata, apice gradatim acuminata, basi rotundata vel late cuneata, margine serru-

lata nisi ad partem tertiam inferiorem, utrinque glabra, supra laete viridis, infra multo pallidior, nervis 4-6-paribus angulo circ. 40° abeuntibus supra haud impressis subalbidis infra vix eminentibus. Inflorescentia axillaris 1-2-flora. Flores aperti non visi. Fructus oblongus atro-ruber pedicello ad 5 mm. longis suffulti; endocarpium 8 mm. longum, 3.5 mm. latum; loculi 1-2.

"China:—Lichiang Range, Yunnan. Lat. $27^{\circ} 40'$ N. Alt. 11,000 ft. Shrub of 6-9 ft. In immature fruit. Open thickets. June 1913." G. Forrest. No. 10,287.

"Mountains of the Chungtien plateau, S.E. of Chungtien. Lat. $27^{\circ} 55'$ N. Alt. 10,000-11,000 ft. Shrub of 6-12 ft. In fruit. In open scrub. July 1913." G. Forrest, No. 10,514.

This new species resembles closely *R. Martinii*, Schneider, but can be distinguished by the texture, colour, nervation, and serration of the leaves.

***Sabia dumicola*, W. W. Sm. Sp. nov.**

Species ex affinitate *S. Schumannianae*, Diels a qua foliis membranaceis multo minoribus floribus in cymulas densas dispositis inter alia divergit.

Frutex 2-6 m. altus, ramis ramulisque glabris viridibus. Folia petiolo circ. 3 mm. longo glabro suffulta; lamina 3-4 cm. longa, 1.5-2 cm. lata, lanceolata, apice acuta vel acuminata, basi rotundata vel cuneata, tempore florendi tenuiter membranacea, margine leviter scariosa, utrinque glabra, nervis utraque facie inconspicuis. Flores foliis coetanei, olivaceo-virides vel atro-rubridi, in cymas circ. 10-floras densas dimidium folii axillantibus aequantes glabras dispositi; pedunculi circ. 1 cm. longi; pedicelli 3-4 mm. longi bracteis brevissimis subulatis caducis. Sepala ovata vel semiorbicularia circ. 2 mm. longa, obtusa. Petala 3.5-4 mm. longa, elliptica, obtusa. Stamina ad trientem corollae attingentia filamentis basi dilatatis. Pistillum stamina subaequans glabrum stigmate punctiformi. Fructus deest.

"China:—Hills to the east of Tengyueh, Yunnan. Lat. 25° N. Alt. 7000 ft. Open scrub in rocky situations. Shrub of 4-8 ft. Flowers olive-green. March 1913." G. Forrest. 9717.

"Ma-Chang-kai Valley, north of Tengyueh. Lat. $25^{\circ} 20'$ N. Alt. 6000-7000 ft. In thickets. Shrub of 10-20 ft. Flowers deep dull red. Feb. 1913." G. Forrest. No. 9569.

"Hills to the north of Tengyueh. Lat. $25^{\circ} 20'$ N. Alt. 7000 ft. Open scrub. Shrub of 6-9 ft. Flowers deep crimson-maroon. March 1914." G. Forrest. No. 12,200.

Sabia Wardii, W. W. Sm. Sp. nov.

Species affinis *S. tomentosae*, Hook. f. a qua petiolis longioribus, pedicellis pilosulis, sepalis sparsim pilosulis divergit.

Frutex vix 2 m. altus; ramuli pilis patentibus fulvidis dense tomentosi. Folia petiolo 6-7 mm. longo fulvido-tomentoso suffulta; lamina vulgo 6-12 cm. longa, 3-5 cm. lata, elliptico-lanceolata vel elliptica, apice acutissima vel breviter acuminata, basi rotundata, subcoriacea, supra atroviridis glabra nisi ad costam impressam pilosulam, infra subcuprea glabra costa nervisque sparsim pilosis exceptis; nervi 4-5 paria fere recto angulo abeuntes longe intra marginem arcuatim confluentes. Flores flavido-virides in paniculas ramosas dispositi; pedunculi 2.5-5 cm. longi dense fulvido-pilosi; ramuli pedicellique graciles dense pilosi. Sepala 1.5-2 cm. longa, ovato-lanceolata, acuta, extus sparsim pilosula. Petala circ. 3 mm. longa, fere 2 mm. lata, plus minusve elliptica, obtusa. Stamina circ. 2 mm. longa filamentis complanatis. Discus glaber. Ovarium glabrum vix 1 mm. diametro; stylus 1 mm. paulo superans stigmatem minuto. Fructus deest.

"Northern Burma:—On granite conglomerate of Putao ridge, in thickets, partly shaded; 1200 ft. Lax shrub of about 5 ft. Flowers pale greenish-yellow. Nov. 1914." F. K. Ward. No. 1955.

This species must be closely akin to the little known *S. tomentosa*, Hook. f. which is described as having shorter petioles, the pedicels and branchlets of inflorescence glabrous, and much smaller flowers.

Schefflera (Heptapleurum) salweenensis, W. W. Sm. Sp. nov.

Species valde affinis *S. racemosae*, Harms a qua habitu humiliore, ramis medulla fistulosa praeditis glabrioribus, foliis anguste oblanceolatis basi cuneatis, floribus regulariter pentameris recedit; *Heptapleurum Hoi*, Dunn ex descriptione foliis oblongis basi saepe rotundatis, petiolis lamina brevioribus differt.

Frutex 3-6 m. altus ramis crassis mox glabrescentibus medulla fistulosa praeditis. Folia superiora tantum visa petiolo 5-17 cm. longo glabro suffulta; foliola 3-5, petiolulis 1-4 cm. longis praedita; lamina ad 15 cm. longa, ad 6 cm. lata, oblanceolata, apice breviter acuminata, basi cuneata, margine integra, papyracea, glabra, supra viridis, infra olivacea vel subglauca, nervis utrinque 9-10 angulo acutiusculo ascendentibus utrinque in sicco subconspicuis, nervulis obscuris. Panícula magna 35 cm. longa, circ. 30 cm. lata, terminalis ramossissima; rami floresque racemose dispositi; pedunculus com-

munis brevis 3-4 cm. longus; rhachis primo tomento stellato minuto fulvo induta, deinde subglabrescens; pedicelli circ. 8 mm. longi fulvo-tomentelli. Flores pentameri; ovarium circ. 2 mm. longum 5-costatum glabrum vel tomento sparsum; calycis margo brevissimus dentibus inconspicuis acutis; petala eis *S. racemosae* similia; styli in unum columnarem coaliti; fructus immaturus 5-locularis.

"China:—Mekong-Salween divide, Yunnan. Lat. 28° 10' N. Alt. 9000 ft. Shrub of 12-20 ft. Flowers green, anthers yellow. In open thickets. Sept. 1914." G. Forrest. No. 13,308.

Schefflera (Heptapleurum) shweliensis, W. W. Sm. Sp. nov.

Species praecedenti valde affinis, foliolis coriaceis 7-11 breviter petiolulatis inter alia divergens.

Frutex 6 m. altus. Folia superiora tantum visa petiolo ad 24 cm. longo suffulta; foliola 7-11, petiolulis vix 1 cm. superantibus praedita; lamina ad 15 cm. longa, ad 4 cm. lata, anguste oblanceolata, apice longiuscule acuminata, basi anguste cuneata, margine integra, coriacea, glabra, supra atroviridis, infra olivacea, nervis utrinque 7-9, vix conspicuis, nervulis obscuris. Panicula vix omnino evoluta circ. 20 cm. longa, terminalis, in triente inferiore tantum ramosa, supra racemiformis; pedunculus communis brevis; rhachis stellato-tomentella; flores cum eis *S. salweenensis* quadrant; ovarium 5-loculare.

"China.—Shweli Valley, Yunnan. Lat. 25° 30' N. Alt. 6000 ft. Shrub of 20 ft. Flowers immature. In thickets. Sept. 1913." G. Forrest. No. 11,817.

Scutellaria hebeclada, W. W. Sm. Sp. nov.

Species ex affinitate *S. Forrestii*, Diels sed foliis floribusque multo minoribus inter alia differt; quoad habitum et magnitudinem ad *S. indicam*, Linn. spectat sed foliis fere sessilibus primo intuitu discrepat.

Herba ad 16 cm. alta, suberecta, basi paulo decumbens ibique ramosa; rami obscure angulati, pilis glandulosis incanis patentibus densissime induti. Folia petiolo circ. 2 mm. longo dense longiterque hirsuto praedita; lamina ad 1.2 cm. longa et lata, plus minusve deltoidea vel late ovata, apice ambitu rotundata, basi truncatula vel truncato-rotundata, margine crenis utrinque 4-5 crenulata, utrinque dense incano-setuloso-hirsuta. Racemi terminales ad 5 cm. longi glanduloso-hirsuti; pedicelli 2-4 mm. longi; bractae foliaceae pedicellis longiores obovatae vel spatulatae. Flores rosei. Calyx 3-4 mm. longus dense

hirsutus. Corolla ad 1.5 cm. longa extra plus minusve glanduloso-pilosa.

"China:—Dry calcareous hills at Pau-pieu-kai, N.E. Yunnan. Alt. 2550 m. Upper lip of corolla rose, lower white. May–June." Maire. Nos. 510, 558 (anno 1914) in Herb. Edin.

Scutellaria shweliensis, W. W. Sm. Sp. nov.

Species habitu fruticuloso, ramis foliisque dense hirsutoglandulosis, floribus axillaribus solitariis inter se remotis racemum laxissimum formantibus inter affines chinenses bene notata.

Fruticulus 30–60 cm. altus ramosus; ramuli substricti pilis glandulosis patentibus albidis dense molliterque hirsuti. Folia petiolo 1–4 mm. longo dense hirsutulo praedita; lamina 0.8–3 cm. longa, 0.5–2 cm. lata, late ovata vel elliptica vel fere orbicularis, apice rotundata, basi plus minusve rotundata, margine subintegra vel paucicrenata, utrinque densiuscule hirsutula; nervi 3–4 paria. Ramuli floriferi ad 20 cm. longi foliis parvulis remotis praediti; flores in axillis solitarii pedicellis ad 5 mm. longis dense glanduloso-hirsutis suffulti; folia axillantia pedicellis fere duplo longiora. Calyx 3–4 mm. longus densiuscule patenti-hirsutus. Corolla ad 1.6 cm. longa, extra glanduloso-pilosula pallide coerulea.

"China:—Shweli Valley, Yunnan. Lat. 25° N. Alt. 6000 ft. Shrubby plant of 1–2 ft. Flowers light blue. Open situations. May 1913." G. Forrest. No. 9871.

Spiraea lichiangensis, W. W. Sm. Sp. nov.

Species affinis *S. gracili*, Maxim. ex Himalaya occidentali a qua foliorum serratura, corymbis paucifloris, floribus multo majoribus inter alia differt; a *S. Rosthornii*, Pritzel foliis glaberrimis primo intuitu discrepat.

Frutex 1.2–1.8 m. altus ramis gracilibus plerumque glaberrimis pallide brunneis lucidis; ramuli hornotini gracillimi purpurei glabri; gemmae parvae acutae albo-pilosulae. Folia petiolo gracili 3–5 mm. longo glabro praedita; lamina vulgo 2.5–3.5 cm. longa, 1.8–2.5 cm. lata, late ovata, in dimidio superiore ambitu triangulari dentibus mediocribus nigro-callosopapiculatis subcrenatis notata, basi rotundata integra, in sicco tenuiter membranacea, utrinque glabra, supra pallide viridis, infra multo pallidior, dense et minute papillosa, reticulo nervorum in sicco utrinque manifesto. Inflorescentiae corymbosae 5–10-florae glaberrimae ad apices ramulorum foliosorum 3–5 cm. longorum orientes; pedicelli 1–1.5 cm. longi; flores albi circ. 1.2 cm. diametro; calycis glaberrimi tubus circ. 2 mm. longus,

lobi triangulares acuti 1 mm. longi; petala rotundata circ. 5 mm. diametro; stamina 40-50 corollam superantia; carpidia circ. 1 mm. longa glabra stylo apicali longiusculo circ. 4 mm. longo, stigmatibus capitato. Fructus maturus deest.

"China:—Lichiang Range, Yunnan. Lat. 27° 35' N. Alt. 12,000 ft. Shrub of 4-6 ft. Flowers creamy-white. In shady forests and thickets. July 1913." G. Forrest. No. 10,158.

"Mountains west of the Fengkow Valley, Yunnan. Lat. 27° 40' N. Alt. 12,000 ft. Shrub of 4 ft. Flowers white, faintly tinged rose. Open pine forests. June 1914." G. Forrest. No. 12,481.

***Spiraea sinobrahuica*, W. W. Sm. Sp. nov.**

Species aliquatenus intermedia inter *S. dasyantham*, Bunge ex regione pekinensi et *S. brahuicam*, Boiss. cum *S. Boissieri*, Schneid. ex Afghanistania; a primo floribus majoribus praeter alia signa divergit, ab aliis foliis basi plus minusve rotundatis magis quam cuneatis, umbellis multifloris recedit; a *S. hirsuta*, Schneid. et *S. chinensi*, Maxim. staminibus brevibus recognoscitur; a *S. yunnanensi*, Franch. foliis utrinque dense pilosulis vel tomentosius discrepat.

Frutex 1.2-2.4 m. altus ramis gracilibus; ramuli hornotini dense fulvido-tomentelli, annotini glabrescentes cinereo-brunnei; gemmae pluriperulatae albido-tomentellae. Folia petiolo 2-4 mm. longo dense fulvido-tomentello praedita; lamina 1.2-2.4 cm. longa, 0.8-1.9 cm. lata, late ovata vel obovata vel subelliptica, in dimidio superiore ambitu rotundato grosse et irregulariter dentata, basi rotundata vel late cuneata, in sicco papyracea, supra opaco-viridis dense et adpresse pilosula, infra paululo pallidior, plus minusve fulvido-tomentosa, nervis 3-4 paribus subtus elevatis. Inflorescentiae umbellato-racemosae, 10-20-florae, fulvido-tomentellae, ad apices ramulorum foliosorum 2-4 cm. longorum orientes; pedicelli circ. 1 cm. longi fulvido-tomentelli; flores albi circ. 8 mm. diametro; calycis tubus turbinatus 1 mm. longus dense albido- vel fulvido-tomentellus lobis triangularibus acutis 1 mm. longis tomentellis; petala rotundata; stamina 20 vix ad medium corollam pertinentia; carpidia circ. 1 mm. longa longiuscule albo-pilosula stylo apicali 0.5 mm. longo praedita. Fructus maturus deest.

"China:—Eastern flank of the Lichiang Range, Yunnan. Lat. 27° 10' N. Alt. 9000-10,500 ft. Shrub of 5-8 ft. Flowers white. Amongst scrub in side valleys. May 1910." G. Forrest. No. 5580.

"Descent to the Yangtze from the eastern boundary of the Lichiang Valley. Lat. 27° 15' N. Alt. 9000-10,000 ft. Shrub

of 4-5 ft. Flowers creamy-white. Open stony pasture. June 1913." G. Forrest. No. 10,117.

Var. *aridicola*, W. W. Sm. Var. nov.

A typo ramis saepe nudiusculis defoliatis sed vix spinescentibus, foliis minoribus subtus densissime tomentosis, inflorescentiis minoribus paulo recedit.

"China:—Arid region of Yangtze, Yunnan. 10,000 ft. Small compact shrub. May 1913." F. Kingdon Ward. No. 305.

"Small bushy shrub in shrub belt and forest, at 9000-10,000 ft., near Atuntsu, Yunnan. June 1913." F. Kingdon Ward. No. 476.

"Descent to the Yangtze Valley from the eastern range of the Lichiang Valley, Yunnan. Lat. 27° 30' N. Alt. 9000-10,000 ft. Shrub of 4-6 ft. Flowers creamy-white. Open rocky situations. June 1913." G. Forrest. No. 10,084.

"Mountains of the Chungtien plateau. Lat. 27° 30' N. Alt. 11,000 ft. Shrub of 2-3 ft. Flowers cream-yellow. Open rocky situations amongst scrub. July 1914." G. Forrest. No. 12,634.

This species and its variety are very close indeed to the Afghan species *S. brahuica*, Boiss. It must also be a near ally of *S. yunnanensis*, Franch. of which, however, Franchet says that the leaves are glabrous above.

Spiraea Wardii, W. W. Sm. Sp. nov.

Species birmanica quae ex affinitate *S. canescentis*, D. Don esse videtur sed foliis minoribus ellipticis utrinque glabris, ramulis inflorescentiae plerumque unifloris differt; in viciniam *S. alpinae*, Pallas fortasse melius posita.

Fruticulus circ. 1 m. altus ramulis annotinis plus minusve laxe albido- vel fulvido-tomentellis, senioribus glabris vel glabrescentibus atropurpureis vel nigridis cortice valde fissili praeditis. Folia petiolo vix 1 cm. longo glabro vel sparsim puberulo suffulta; lamina 5-6 mm. longa, 3-4 mm. lata, elliptica, apice rotundata brevissime callosio-apiculata vel brevissime emarginata, basi rotundata vel late cuneata, integra, tenuiter papyracea, utrinque glabra, supra atroviridis nervulis obscuris, infra pallidior minute papillosa reticulo nervorum subconspicuo. Inflorescentiae subumbellato-racemosae vel si vis corymbosae circ. 10-florae fulvido-tomentellae, ad apices ramulorum foliosorum 2-3 cm. longorum orientes; ramuli inflorescentiae 5-7 mm. longi tomentelli plerumque 1-flori, rarius 2-flori, folio caulinis simili vel bractea lineari apud medium

praedita; flores albi roseo-tincti fragrantés circ. 4 mm. diametro; calycis tubus turbinatus 1 mm. longus extus tomentellus, intus villosulus, lobi triangulares 1 mm. longi acuti glabri vel subglabri; petala rotundata vix 2 mm. diametro; stamina 20 corollam aequantia; carpidia albo-pilosa cum stylo subaequante 1 mm. longa; fructus maturus deest.

"Upper Burma:—Ridge of Naung-Chaung, Nwai divide. Small bushy compact shrub of 1-3 ft. in open. South-facing granite-boulder screes at about 12,000 ft. Flowers white, tinged with pink, fragrant. July 1914." F. Kingdon Ward. No. 1799.

Spiraea yunnanensis, Franch., var. **siccanea**, W. W. Sm.
Var. nov.

A typo foliis subtus glaucis ad nervos tantum pilosis recedit.

"China:—Langkong-Hoching Mountains. Lat. 26° 16' N. Alt. 8000 ft. Shrub of 3-5 ft. Flowers white. Open dry situations. May 1913." G. Forrest. No. 9912.

"Langkong-Hoching divide. Lat. 26° 10' N. Alt. 8000 ft. Shrub of 3-5 ft. Flowers creamy-white. Dry stony situations amongst scrub. May 1913." G. Forrest. No. 9972.

I have not seen Franchet's type, but Forrest's specimens come from very near the type-locality—in lapidosis calcareis supra Mo-so-yn prope Lan-kong, alt. 2200 m.; the type is described as having leaves ashy-tomentose below, whereas the Forrestian plants are pilose on the veins only and may be specifically different. See also under *Spiraea sinobrahica* above. From *S. chinensis*, Maxim. and *S. hirsuta*, Schneider, the plant collected by Forrest is distinguishable among other points by the short stamens; Franchet does not give any data indicating the length of the stamens in his *S. yunnanensis*.

Sporoxeia, W. W. Sm. Genus novum Melastomacearum.

Genus affine *Oxyspora*, DC. sed inflorescentiis axillaribus nec terminalibus nec paniculatis, floribus umbellatim dispositis praeter signa minora differt; structura floris fructusque cum *Oxyspora* bene congruit.

Calycis glabrati tubus campanulatus obscure 4-gonus; lobi 4, longiusculi, acuti. Petala 4, obovata vel suborbicularia, glabra. Stamina 8, paulo inaequalia vel subaequalia; antherae similes lineari-subulatae paulo curvatae, 1-porosae, basi breviter bilobatulae, connectivo basi non producto postice calcarato. Ovarium septis 4 calyci adhaerens, 4-loculare; stylus filiformis declinatus stigmate punctiformi. Capsula breviter quadrato-cylindrica, calyce carnosulo 8-costato inclusa, 4-locularis.

Semina minuta (matura non visa). Fruticulus gracilis erectus glaber vel glabrescens. Folia longe petiolata, orbicularia vel suborbicularia, breviter acuminata, minutissime serrulata, 5-7-nervia, minute glandulosa. Flores inter minores in axillis inferioribus (an semper?) 2-5-fasciculati, rosei.

Sporoxeia sciadophila, W. W. Sm. Sp. nov.

Fruticulus circ. 1 m. altus ramulis plus minusve quadratis glabris vel primo sparsim furfuraceo-puberulis. Folia petiolo 4-8 cm. longo minute furfuraceo-glanduloso praedita; lamina vulgo 7-10 cm. longa, 6-10 cm. lata, fere orbicularis, apice breviter et abrupte acuminata, basi plerumque rotundata, membranacea, margine levissime serrulata, utrinque glandulis minutis nitentibus crebre punctata, epilosa, nervis primariis 5-7 arcuatim percurrentibus conspicuis, trabeculis parallelis 15-20. Flores 2-5-nati ex axillis foliorum inferiorum (saepe delapsorum) orientes. Pedicelli circ. 1 cm. longi, fructu ad 2 cm. aucti, minute glandulosi. Calycis tubus circ. 4 mm. longus, circ. 3 mm. latus, basi rotundatus nec clavatus, anthopodio deficiente, carnosulus, minute nitenti-glandulosus; lobi 3-4 mm. longi, ovati vel ovato-triangulares, apiculati, diu persistentes. Petala 5-6 mm. diametro rosea. Stamina circ. 1 cm. longa, filamentis glabris circ. 5 mm. longis, antheris calcare carnosulo postice ornatis. Ovarium vertice depressum glabrum. Capsula circ. 4 mm. longa valvis 4 dehiscens; semina matura delapsa; calycis costae 8 in fructu sicco conspicuae.

"Upper Burma:—Hpimaw limestone peak, in shady damp gullies of Naung-Chaung Valley. Alt. 4000-6000 ft. Under-shrub of 2-4 ft. with bright pink flowers. Aug. 1914." F. K. Ward. No. 1775.

The generic name is intended to suggest the close affinity of the genus with *Oxyspora*, and must not be interpreted as indicating that the seeds of *Sporoxeia* are pointed. They may be, but ripe seeds are not yet available.

Stemona vagula, W. W. Sm. Sp. nov.

Species ex affinitate *S. japonicae*, Franch. et Savat.; foliis lanceolatis trinerviis brevi-petiolatis inter alia differt.

Planta 30-45 cm. longa, scandens vel inter herbas fruticosque longe vagans. Radices numerosae tuberibus 7-10 cm. longis circ. 2 cm. latis oblongo-ovoideis terminatae. Caulis flexuosus vel tortuosus, gracilis striatulus; pars inferior (fere subterranea) pallida foliis squamiformibus membranaceis albidis 2-3 mm. longis remotis praedita; pars superior bene foliata. Folia opposita vel saepius ternatim verticillata, plerumque

4-6 cm. longa, 0.7-2 cm. lata, lanceolata vel lineari-lanceolata apice acuta vel paulo acuminata basi cuneata vel subrotundata in sicco membranacea trinervia glaberrima; petiolus 1-3 mm. longus. Pedunculus circ. 2 cm. longus petiolo adnatus uniflorus; bracteola subulata 2-3 mm. longa medio affixa. Perianthium \pm 2 cm. longum extus roseum intus album; lobi oblongi 3-4 mm. lati acuti breviter apiculati. Stamina 4; filamenta circ. 1 mm. longa complanata; antherae lineares \pm 3 mm. longae dorsifixae connectivo basi adnatae; filamenta in appendicem linearem erectam perianthium fere aequantem producta; antherae in appendicem brevem antheras aequantem vel superantem nonnunquam apice bilobam productae. Ovarium parvum stigmate sessili. Fructus. . . . Semina ovoidea 5 mm. longa, 2.5 mm. lata, longitudinaliter alte \pm 12-sulcata brunnea basi appendicibus vesiculosus numerosis praedita. Embryo minimus oblongus.

"China:—Descent to the Yangtze from the eastern boundary of the Lichiang Valley, Yunnan. Lat. $27^{\circ} 15' N$. Alt. 8000 ft. Plant of 12-18 inches. Flowers white, flushed rose exterior. Margins of shady thickets. Aug. 1913." G. Forrest. No. 10,711.

Stemona Wardii, W. W. Sm. Sp. nov.

Species affinis *S. vagulae*, W. W. Sm. a qua foliis multo minoribus linearibus, staminibus atque appendicibus diversis recedit.

Planta gracillima circ. 30 cm. longa scandens. Radices non visae; caulis pars inferior foliis squamiformibus praedita. Folia ternatim verticillata circ. 2 cm. longa, 1-2 mm. lata, linearia fere subulato-linearia in sicco membranacea nervulis tribus pererrata glabra. Pedunculus circ. 1 cm. longus petiolo adnatus uniflorus; bracteola subulata medio affixa. Perianthium ad 2.3 cm. longum extus roseum intus album; lobi oblongi ad 5 mm. lati apice apiculati sed vix acuti. Stamina 4; filamenta circ. 1 mm. longa; antherae lineares circ. 4 mm. longae connectivo basi adnatae; filamenta in appendicem linearem perianthium fere aequantem membranaceo-alatam producta; antherarum appendices antheras subaequantes. Fructus deest.

"China:—Arid region of the Yangtze, Yunnan. Alt. 10,000 ft. Twiner with long straggling stems. May 1913." F. Kingdon Ward. No. 302.

This species appears to be the representative of *S. vagula* in the more arid areas of Yunnan. The flowers resemble those of that species.

***Sterculia euosma*, W. W. Sm. Sp. nov.**

Species affinis *S. guttatae*, Roxb. a qua floribus majoribus fragrantibus intus fere glabris inter alia differt.

Arbor 6-18 m. alta; ramuli primo dense ferrugineo-tomentosi tandem cinerei decorticantes. Folia ad apices ramorum conferta, juvenilia floribus coaetanea tenuiter membranacea utrinque plus minusve sparsim stellato-ferrugineo-tomentosa, adulta ad 24 cm. longa, ad 12 cm. lata, ovato-elliptica vel elliptica, apice breviter et subabrupte acuminata, basi plus minusve rotundata nec cordata, coriacea, integra, supra glabra vel subglabra infra pilis stellatis hic illic conspersa, costa media subtus valde elevata, nervis primariis utrinsecus 7-10 paribus conspicuis curvatis; petiolus circ. 5 cm. longus primo dense ferrugineo-tomentosus mox glabrescens. Racemi numerosi ad apices ramulorum approximati folia juvenilia subaequantur plus minusve ferrugineo-tomentosi; pedicelli 1-1.5 cm. longi. Flores bisexuales visi. Calycis circ. 3 cm. diametro segmenta fere ad basim libera lineari-lanceolata, medio fere 4 mm. lata, acutiuscula extus puberula, intus fere glabra, glandulis globosis conspersa. Stamina 10; columna glabra circ. 2 mm. longa. Pistillum albo-hirsutum stylo pilosulo deflexo. Fructus maturus circ. 10 cm. longus, 3 cm. latus, lignosus; semina ovoidea 2 cm. longa nigra.

"China:—Shweli Valley, Yunnan. Lat. 25° 30' N. Alt. 6000 ft. Tree of 30-60 ft. Flowers fragrant, lilac with deep violet centre. In open situations. April 1913." G. Forrest. No. 11,862.

"Hills to the north of Tengyueh, Yunnan. Lat. 25° 15' N. Alt. 7000 ft. Tree of 20-40 ft. Flowers dull crimson-lake. In mixed forests. May 1912." G. Forrest. No. 7720.

"Hills to the south of Tengyueh. Lat. 25° N. Alt. 6000 ft. Tree of 30-50 ft. In fruit. Seeds shining, deep chocolate brown. Interior of capsule bright scarlet, exterior deep ruddy buff or apricot, widely expanded after seed is cast. In forests. June 1912." G. Forrest. No. 8340.

***Thalictrum semiscandens*, W. W. Sm. Sp. nov.**

Species distinctissima, habitu plus minusve scandente inflorescentiae ramulis pedicellisque praelongis capillaribus bene notata; quoad structuram floris ad *T. atriplex*, Fin. et Gagn. appropinquare videtur.

Planta ad 3 m. alta ex collectore; pars suprema tantum visa. Caules ramosi gracillimi glabri. Folia caulina petiolo circ. 6 cm. longo gracillimo praedita; lamina ternatim 3-4-pinnata petiolulis capillaribus ultimis circ. 1 mm. longis; foliola

4-12 mm. longa, 3-9 mm. lata, suborbicularia vel ovata vel elliptica, apice obtusa basi rotundata vel cuneata, integra vel trilobulata, utrinque glabra, membranacea. Inflorescentia ramosissima ramulis capillaribus, pedicellis ipsis ad 8 cm. longis vel ultro subscandentibus. Flores parvi albi. Sepala circ. 3 mm. longa elliptica. Stamina (ut videtur pauca) circ. 9 filamentis filiformibus apice vix dilatatis, antheris filamenta subaequantibus oblongis muticis. Achaenia plerumque 2-3 sessilia, circ. 5 mm. longa, apice basique angustata, valde striata, stylo conspicuo praedita.

"Upper Burma :—Hpimaw, near the Chinese frontier. Growing in damp thickets in shade of shrubs and long grass, in wet gulleys with granite sandy soil. Alt. 7000-8000 ft. Petals deciduous white. Stamens pale pink or violet. Plant reaches a height of 8 or 10 feet, supporting itself on the bushes by entangling its capillary flowering stems. August 1914." F. Kingdon Ward. No. 1857.

A peculiar species ; the long capillary subprehensile branches of the inflorescence are very remarkable.

Thea taliensis, W. W. Sm. Sp. nov.

Species sectionis *Eu-Thea* ; ob ovarium hirsutum staminisque brevissime coalita ex affinitate *T. sinensis*, Linn. esse videtur a qua habitu, foliis majoribus oblanceolatis vel obovatis, floribus multo majoribus, fructu lignoso differt.

Frutex circ. 3 m. altus. Rami satis crassi glabri. Folia petiolo 5-7 mm. longo glabro praedita ; lamina ad 14 cm. longa, plerumque 4-6 cm. lata, raro ad 7.5 cm., oblanceolata vel obovata, apice obtusiuscule acuminata, basi cuneata, margine serrata, papyracea, glabra, utrinque papilloso-asperulata, supra vix lucida, infra olivacea, nervis supra haud distinctis infra subconspicuis, nervulis immersis. Pedunculi 1-1.5 cm. longi glabri. Flores expansi 5-6 cm. diametro. Sepala orbicularia, 5-10 mm. diametro, coriacea, margine lato membranaceo ciliolato cincta, extra glabra, intus sericea. Petala alba, late elliptica, circ. 2 cm. lata, obtusa. Stamina basi tantum coalita circ. 1-2 cm. longa. Ovarium dense albobillosulum stylo basi villosulo supra subglabro. Fructus depressoglobosus plus minusve 5-angulatus pilosulus muro 3-4 mm. crasso lignoso praeditus ; semina in loculis solitaria.

"China :—Ghi Shan east of Tali Lake, Yunnan. Lat. 25° 48' N. Alt. 9000 ft. Shrub of 10 ft. Flowers white. Open scrub. Aug. 1914." G. Forrest. No. 13,477.

"Western flank of the Tali Range. Lat. 25° 40' N. Alt. 7000-8000 ft. Shrub of 10 ft. In open scrub. Aug. 1914." G. Forrest. No. 13,503.

"Flanks of the Mingkwong Valley, Yunnan. Lat. 25° 15' N. Alt. 6000-7000 ft. Shrub of 6-12 ft. In fruit and amongst scrub. June 1912." G. Forrest. No. 8210.

Thunbergia adenophora, W. W. Sm. Sp. nov.

Species ex affinitate *T. grandiflorae*, Roxb.; ramulis longiuscule fulvo-setosis, bracteolis glandulis peziziformibus conspersis bene notata; a *T. Lacei*, Gamble inflorescentiis bracteolisque corollisque longe recedit, foliis setisque ad eam aliquatenus propinquat.

Frutex scandens ad 8 m. altus; ramuli setis fulvis circ. 5 mm. longis patentibus dense vestiti atque pubescentes. Folia petiolo 3-4 cm. longo basi incrassato tortoque longe setoso et pubescente suffulta; lamina vulgo 10-11 cm. longa, 6-7 cm. lata, plus minusve ovata, apice acuminata apiculata, basi breviter sed latiuscule cordata, margine irregulariter sinuato-lobulata, supra dense molliterque adpresso-setosa, infra densius; nervi e basi orientes 7, exteriores 2 indistinctiores. Inflorescentiae pendentes 30 cm. longae vel ultro racemiformes ex verticillis circ. 10 remotulis 2-4-floris compositae; rhachis setosa atque fulvo-tomentella; pedunculi 1.5-2.5 cm. longi fulvo-tomentelli apice expansi et glandulis peziziformibus conspersi; bracteae lanceolatae 2-3 mm. longae tomentellae; bracteolae 2, ovato-oblongae, 3 cm. paulo superantes, tomentellae, glandulis peziziformibus nigris dense conspersae. Calyx annuliformis subinteger circ. 2.5 mm. altus tomentellus. Corolla alba, ad basin saturate kermesina; tubus infra constrictus ad 3.5 cm. longus, basi sparsim setosulus, supra glaber; lobi rotundati 2-3 cm. diametro. Stamina 4 filamentis basi pubescentibus, antheris setosis calcaratis. Ovarium glabrum stylo gracili ad 2 cm. longo stigmatе infundibuliformi.

"Burma:—Valley of the Taping. Lat. 24° 25' N. Alt. 2000 ft. Scandent shrubby plant of 20-25 ft. Flowers white shaded to deep crimson-lake towards base. Open situations on trees. Feb. 1914." G. Forrest. No. 12,193.

Trailliaedoxa, W. W. Sm. et G. Forrest. Genus novum.

Rubiacearum genus novum incertae sedis; quoad structuram floris ad *Albertain* tribum Africanum spectat; habitus *Hamiltoniam* potius suggerit.

Fruticulus ramosissimus caudice lignoso. Folia opposita parva brevissime petiolata. Stipulae bifidae subulatae. Flores roseo-albidi vel flavidi in cymulas subglobosas terminales et axillares dispositi parvi. Calycis tubus cylindricus; lobi 5 lineares dentibus nullis. Corolla infundibularis fauce glabra;

lobi 5 oblongo-lanceolati aestivatione sinistrorsum contorti. Stamina 5 fauci corollae inserta paululo exserta filamentis brevissimis; antherae dorso affixae oblongae. Ovarium biloculare; stylus filiformis; stigma bilobum. Ovula in loculis solitaria apice pendula funiculo incrassato. Fructus (haud maturus) crustaceus forsan demum in cocos 2 indehiscentes divisus.

Species unica alpina in provincia yunnanensi Chinae occidentalis crescens.

Trailliaedoxa gracilis, W. W. Sm. et G. Forrest.

Fruticulus erectus ramosissimus 20-45 cm. altus, nunc paulo elatus usque ad 60 cm., habitu *Genistae*, caudice magno lignoso caules multos emittente ortus. Caules stricti graciles teretes virides dense minute crispato-pilosuli, vetustiores subglabrescentes, ramis ramulisque plurimis modice foliatis. Folia petiolo brevissimo vix 1 mm. excedente suffulta; lamina 7-10 mm. longa 3-4 mm. lata obovata vel oblanceolata apice rotundata basi in petiolum sensim angustata integra subcoriacea supra viridis glabra vel sparsim pilosula infra pallidior ad costam albido-pilosula ceteroquin glabra vel subglabra nervis utraque facie obscurissimis; stipulae bifidae breves subulatae. Cymulae subglobosae ramulos terminantes vel in axillis superioribus orientes 6-12-florae dense crispato-pilosulae folia subaequant; pedunculus \pm 5 mm. longus; pedicelli vix 1-2 mm. superantes dense pilosuli. Calycis tubus cylindricus circ. 1 mm. longus dense crispato-pilosulus; lobi circ. 1 mm. longi lineares acuti. Corollae roseo-albidae vel flavidae tubus elongato-infundibularis circ. 3 mm. longus circ. 0.75 mm. latus extus glaber vel sparsim pilosulus, fauce intusque glaber; lobi 5 patentes circ. 1.5 mm. longi, \pm 1 mm. lati, oblongo-lanceolati obtusiusculi extus glabri vel sparse pilosuli intus glabri. Stamina fauci corollae inserta paululo exserta glabra antheris 0.75 mm. longis dorso affixis filamenta brevissima superantibus. Ovarium biloculare stylo filiformi exserto circ. 5 mm. longo, stigmatibus bilobis; ovula in loculis solitaria pendula funiculo incrassato. Fructus immaturus bisulcatus crustaceus.

"West China:—Tufted shrub of 8-12 inches. Flowers ruddy yellow. On limy pasture and ledges of cliffs in the mountains in the N.E. of the Yangtze bend, Yunnan. Lat. 27° 45' N. Alt. 11,000 ft. July 1913." G. Forrest. No. 10,535.

"Shrub of 2 ft. Flowers rosy-white. Stony pasture and amongst shrub and side valleys in the mountains in the N.E. of the Yangtze bend. Lat. 27° 45' N. Alt. 9000 ft. Aug. 1913." G. Forrest. No. 10,713.

"Shrub of 12-18 inches. Flowers creamy-white. Open

rocky pasture and amongst scrub in the mountains of the Chungtien plateau, Yunnan. Lat. 27° 30' N. Alt. 9000 ft. July 1914." G. Forrest. No. 12,638.

The generic name is in honour of the wife of the collector. The exact position of this genus in the *Rubiaceae* is not satisfactorily determined. Mature fruit would aid materially. The plant in its floral structure is closely allied to the *Albeteae*, a tribe confined to Africa; from them, however, it is widely different in habit. In this latter respect it suggests *Hamiltonia* among the *Paedericeae*.

Viburnum foochowense, W. W. Sm. Sp. nov.

Species affinis *V. Fordiae*, Hance a quo foliis ovato-lanceolatis subacuminatis supra lucidulis sparsim pilosulis corymbis brevi-pedunculatis inter alia differt.

Frutex ramulis primo pilis fasciculatis dense fulvo-tomentosis. Folia petiolo 3-10 mm. longo tomentoso suffulta; lamina 4-8 cm. longa, 1.5-4.5 cm. lata, plerumque ovato-lanceolata vel ovata, basi late cuneata vel subrotundata, apice subacuminata vel acuta, margine serrato-dentata, chartacea vel tempore maturitatis fructuum subcoriacea, supra atroviridis lucida ad costam impressam setosula caeterum sparsim pilosula vel glabra, minute punctulata, infra pallidior ad costam nervosque eminentes setosula, caeterum sparsius setosula vel glabrescens; nervi utrinque 5-6 subparalleli ad marginem excurrentes; stipulae nullae. Corymbus terminalis circ. 5 cm. diametro, pedunculo 3-10 mm. longo tomentoso suffultus, radiis primariis plerumque 5 fulvo-tomentosis, floribus e radiis ordinis tertii natis. Calycis lobi 0.5 mm. longi triangulares cum ovario pilosi. Corolla rotata 5 mm. diametro ad tres partes in lobos suborbiculares divisa extra pilosula. Stamina 3 mm. longa corollam paululo superantia. Drupa ovoidea circ. 5 mm. longa, rubra glabra.

"On the Min River, Foochow, China. Nov. 1897 and Jan. 1898." Coll. W. R. Carles. Nos. 834, 852.

Viburnum parvifolium, W. W. Sm. Sp. nov.

Species affinis *V. Fordiae*, Hance et *V. hirtulo*, Rehder a quibus foliis parvis 2-4.5 cm. longis inter alia dignoscitur.

Frutex ramulis primo pilis fasciculatis dense fulvo-tomentosis tandem glabrescentibus brunneis. Folia petiolo \pm 5 mm. longo tomentoso suffulta; lamina saepe rotundato-ovata, 2 cm. longa, fere 2 cm. lata, nonnunquam ovata, ad 4.5 cm. longa, ad 3 cm. lata, basi plerumque rotundata, apice acuta (saepe brevissime), margine dentata, in sicco membranacea, supra

sparsim pilosula, ad costam impressam setosula, infra ad costam nervosque eminentes dense setosula, caeterum sparsius; nervi utrinque 5-6, subparalleli ad dentes excurrentes; stipulae nullae. Corymbus terminalis circ. 5 cm. diametro, pedunculo 5-10 mm. longo tomentoso suffultus, radiis primariis 3-6 fulvo-tomentosis, floribus e radiis ordinis tertii vel quarti natis. Calycis lobi circ. 0.5 mm. longi triangulari-ovati cum ovario pilis fasciculatis dense pilosi. Corolla rotata 4 mm. diametro ad tres partes in lobos suborbiculares divisa extra pilosa. Stamina corollam paululo superantia. Drupa ovoidea \pm 6 mm. longa, \pm 4 mm. lata rubra glabra apice pilosula excepta.

"At Thaiyong, a mountain valley 2000 ft. elevation, sixty miles west of the port of Swatow, China. Sept. 1901." Coll. Dr. J. M. Dalziel. Nos. 173, 174.

"At Wukingfu, west of Swatow." Dalziel. No. 175.

Viburnum Wardii, W. W. Sm. Sp. nov.

Species ex affinitate *V. erubescens*, Wall. et *V. oliganthi*, Batal.; ab ambobus nervatione foliorum inter alia facile discriminatur; nervi incurvi nervulique subtus bene distincti arcte et pulchre reticulati.

Arbor parva ex collectore 7-10 m. alta; ramuli glabri vel subglabri mox cinerascens. Folia petiolo \pm 1.5 cm. longo glabro vel sparsim pilosulo praedita, oblongo-lanceolata vel lanceolata, 8-12 cm. longa, 3-6 cm. lata, basi \pm rotundata, apice acuminata, margine regulariter serrata serraturis indurato-apiculatis, membranacea, maturitate utrinque glabra vel subtus ad costam pilis stellatis parcissime conspersa, supra atroviridia, infra pallidiora nervis utrinque 5-7 incurvatis cum nervulis pulchre reticulantibus. Inflorescentia terminalis paniculata in nostris speciminibus ad 5 cm. longa, pilis fasciculatis \pm conspersa; pedunculus 2-3 cm. longus. Calycis lobi triangulares acuti vel obtusiusculi circ. 1 mm. longi glabri. Corolla alba fragrans tubulosa \pm 8 mm. longa glabra vel subglabra; lobi orbiculares circ. 2 mm. diametro. Stamina ad summam corollam \pm attingentia. Ovarium turbinatum glabrum vel pilis furcatis sparsissime conspersum. Fructus deest.

"E. Upper Burma:—Small bushy tree of 20-30 feet. By streams in forest, in damp and deep shade. Flowers white, waxy-looking, fragrant. At an elevation of 8000 ft., near Htaungaw, Valley of Naung-Chaung, Lashi country. June 1914." F. Kingdon Ward. No. 1620.

This species belongs to the section *Thyrsosma*, is akin to *Viburnum erubescens*, Wall., and is readily distinguished among other marks by the nervation of the leaf.

Zizyphus montana, W. W. Sm. Sp. nov.

Species ex affinitate *Z. xylopyri*, Willd. et *Z. yunnanensis*, Schneider; inflorescentiis vix pedunculatis, fructibus flavis glabris bene notata.

Frutex 2-9 m. altus spinosus; spinæ 5-15 mm. longæ validæ rectæ; ramuli primo dense ferrugineo-tomentelli mox glabrescentes cinerascens vel rubescentes lenticellis parvis rotundis albidis notati. Folia alterna petiolo 5-10 mm. longo tomentello mox glabro suffulta; lamina 3-8 cm. longa, 2-3 cm. lata, elliptica, apice rotundata vel (eodem specimine) breviter obtuseque acuminata, basi obliqua plus minusve rotundata, crenato-dentata, primo membranacea tandem papyracea, supra glabra subtus ad nervos primarios tres nervulosque ferrugineo-pilosula, tandem ex toto glabra. Inflorescentiæ axillares congestæ 10-30-floræ pedunculis nullis vel subnullis, pedicellis petiolos subaequantibus tomentellis; flores virides 5-6 mm. diametro subumbellatim dispositi; alabastra dense tomentella. Sepala deltoidea vix 2 mm. longa acuta. Petala sepalis fere æquilonga cucullata. Styli plerumque duo ad medium coaliti. Fructus globosus circ. 2 cm. diametro glaber flavus; mesocarpium crassum spongiosum; endocarpium 1.5 cm. diametro muro 3 mm. crasso; semina 2 olivacea circ. 1 cm. longa et lata.

"China:—Descent to the Yangtze from the eastern boundary of the Lichiang Valley, Yunnan. Lat 27° 15' N. Alt. 9000-10,000 ft. Spinous shrub of 20-30 ft. In fruit, fruits light yellow. In thickets. Aug. 1913." G. Forrest. No. 10,629.

"Spinous shrub of 6-8 ft. Immature fruit. July 1913." G. Forrest. No. 10,372.

"On the Tong Shan in the Yangtze bend, Yunnan. Lat. 27° 20' N. Alt. 9000 ft. Spinous shrub of 20 ft. In fruit. In open thickets. Aug. 1913." G. Forrest. No. 10,889.

"Mountains of the Chungtien plateau, Yunnan. Lat. 27° 30' N. Alt. 9000 ft. Shrub of 20 ft. Flowers green. Open dry rocky situations. April 1914." G. Forrest. No. 12,401.

Mr. Forrest notes that the priests use the fruit of this plant as beads for their rosaries.